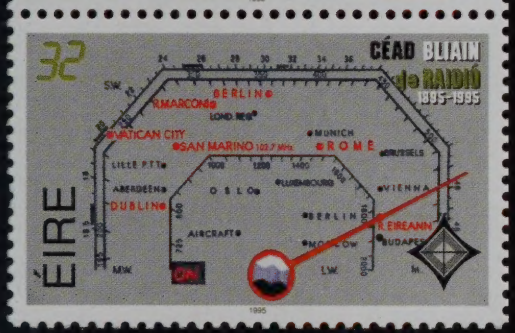
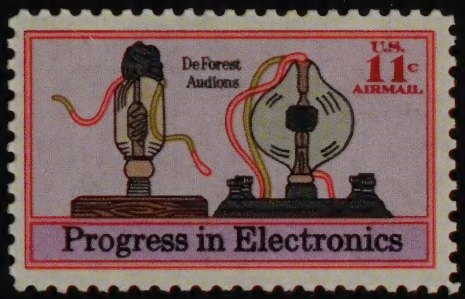
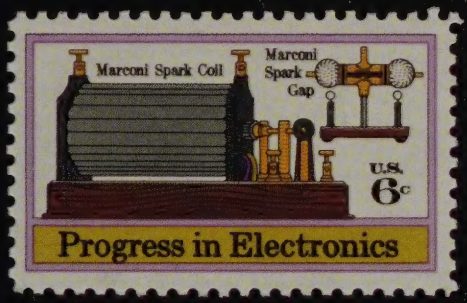
UNIVERSAL RADIO
CATALOG 06-06
$3.00





# RE_INVENTING RADIO
Through_Innovation

## E1 AM/FM/Shortwave/XM Ready Radio

**XM Radio offers hundreds of music, news, talk, and sports programming channels**
• High-Performance receivers for international and local radio listening • User-defined station memory presets with customizable organization • SSB • Passband Tuning • Synchronous Detector • Direct frequency entry for all bands • Shortwave range of 1711 – 29,999 KHz • 1700 station presets with memory scan function

## E10
AM/FM/Shortwave Radio

**Intelligent features. Strong performance.**
• Shortwave range of 1711 – 29,999 KHz • 550 programmable memories • Memory page customization • Manual & auto scan • Direct keypad frequency entry, ATS • Internally recharges included Ni-MH batteries • Clock with alarm, sleep timer & snooze functions

## E100
AM/FM/Shortwave Radio

**Full-size features in your palm or pocket.**
• Shortwave range of 1711 – 29,999 KHz • 200 programmable memories • Memory page customization • Manual & auto scan • Direct keypad frequency entry • Clock with alarm, sleep timer & snooze functions

etón®
RE_INVENTING RADIO
www.etoncorp.com

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## INTRODUCTION TO UNIVERSAL

Universal was founded in 1942 by F.R. "Gibby" Gibb W8IJ. Universal Service, as it was then called, was located on North Third Street in downtown Columbus, Ohio. Universal carried all the major lines of the time including Millen, Drake, Collins, Hammarlund, Hallicrafters, Johnson and National. Most of the brands have changed, and so has our location. But the same dedication to customer service and satisfaction that our company was founded upon over sixty years ago, still remains. As one of the oldest retail radio stores in the country, we are grateful for the support provided to us by the radio community over these many decades. We will continue to offer the finest in new and used communications equipment at competitive prices. This catalog has been designed to introduce you to the newest and best in communications equipment. As you get to know us, we think you will want to become one of our valued customers.

### FACTORY DIRECT DISTRIBUTOR

Universal Radio is a direct authorized distributor for all the major communications lines. We can therefore give you objective advice on all brands of equipment.

### ESTABLISHED OVER 60 YEARS

Universal has been serving the amateur and listening community since 1942. You can be assured that we will be here in the future for support and service.

### SHOWROOM DISPLAY

Universal is one of only a few stores in the country with a fully stocked showroom. Our 10,000 square foot facility is open six days a week and features an exceptional selection of communications equipment for the ham and SWL. Every major piece of equipment is on display and operational! If you travel through Central Ohio, please stop in and listen to our excellent selection of communications products. We are only 20 minutes from downtown Columbus or the airport.

### LOW PRICES

You will find our prices very competitive and we do not add a surcharge to your order if you are using a credit card. Since we do buy direct from the manufacturers, we can offer you favorable prices.

### MORE INFORMATION

We at Universal think an informed customer is a satisfied customer. We want to provide you with all the information you need to make your next communications purchase. This catalog is a first step towards this goal. We have specification sheets on most large items and will send them to you upon request. A great deal more technical information and full color photos of our products are available at our website:

**www.universal-radio.com**

You can also reach this same website by typing

**www.RFfun.com**

### USED EQUIPMENT

Universal offers a fine selection of used equipment for the communications enthusiast. Every piece of used equipment that we take in is thoroughly tested before being released for resale. All our used equipment carries a sixty day parts and labor limited warranty (unless specifically stated otherwise). Whether you are a new hobbyist on a budget, or an advanced DXer looking for a "standby" set; check our inventory of used gear! We publish a complete list of used equipment every month! To get your copy send a self-addressed stamped envelope. Our used equipment list is also posted on our website weekly:

**www.universal-radio.com**

### TRADE-INS

Yes, we do take trade-ins! If you would like to trade your present gear in for a new unit or even another piece of used gear, let us know. Please contact us indicating what you wish to trade-in. Indicate the condition of the equipment and whether you have the box, manual, etc. We also buy clean used amateur and shortwave radio equipment.

### LAY-AWAY

Universal offers a convenient layaway plan. To place any new item in layaway for up to sixty days, a 33% deposit is required. 33% more is required at 30 days. The balance is required at 60 days (or sooner). The item will be shipped after full payment. There are no service or interest charges.

### FOREIGN ORDERS

Universal is pleased to process overseas orders to most areas on most items. We can prepare quotes or proforma invoices on request. Canadian customers may call toll-free for a shipping quote. Most manufacturer's warranties are *not* valid outside of the United States. Most items we carry are not CE certified for export to Europe.

### FULL SERVICE

Universal offers a selection of receivers second to none. Upon request, we will inspect and test any radio prior to shipment at no extra charge. Our well equipped service center is **factory authorized** to handle your warranty service needs on most lines. We are interested in you whether you need an 89¢ plug or a $4000.00 receiver.

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**Mail:** **Universal Radio Inc.**
6830 Americana Parkway
Reynoldsburg, OH 43068-4113

**Phone:** **800 431-3939** Orders & Prices
**614 866-4267** Technical Info.

**FAX:** **614 866-2339**

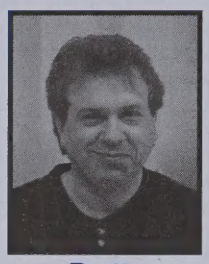
**E-mail:** **dx@universal-radio.com**

**Web:** **www.universal-radio.com**

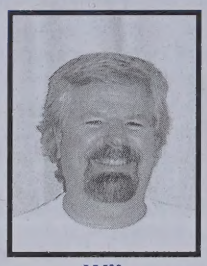
## UNIVERSAL STAFF

**John**
***Sales***
*KA8ZPF*

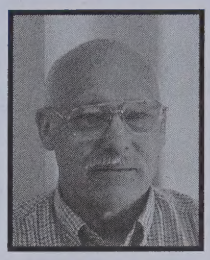
**Mike**
***Sales***
*W8UBH*



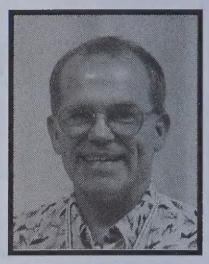
**Brett**
***Sales***
*KC8VNI*



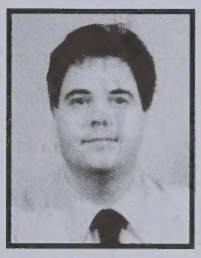
**Wil**
***Sales***
*W8WB*



**Larry**
***Sales***
*K8BBQ*



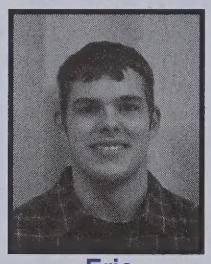
**Art**
***Sales***
*W8OSZ*



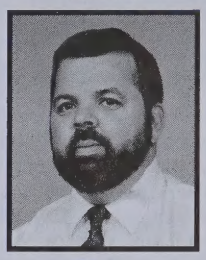
**Scott**
***SW Sales***
*KB2ARL*

**Fred**
***President***
*N8EKU*

**Barbara**
***V. President***
*KC8VWI*



**Eric**
***Shipping Mgr.***
*KC8VWL*

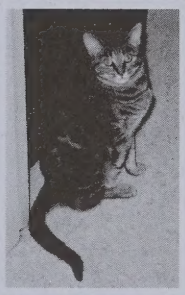


**Steve**
***Internet***
*NI8F*

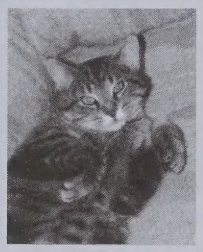
**Elizabeth**
***Office Mgr.***

## UNIVERSAL OFFICE CATS

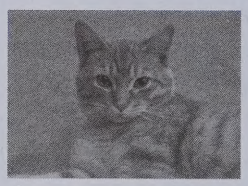
*Now I live inside at Universal.* **Baby Cat**



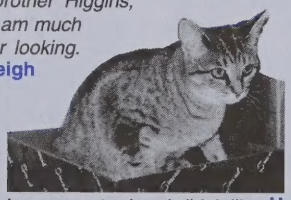
*Yes, I do resemble my brother Higgins, but I am much better looking.* **Harleigh**



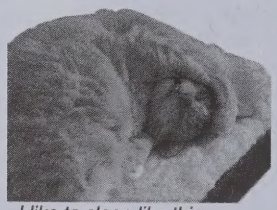
*Just remember who really runs this place.* **Henry**



*I am the supreme ruler of the warehouse.* **Boomer**

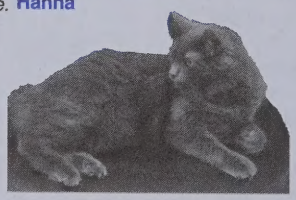


*I never met a box I didn't like.* **Hanna**



*I like to sleep like this.* **Claire**

*Thanks for warming this chair up for me.* **Higgins**

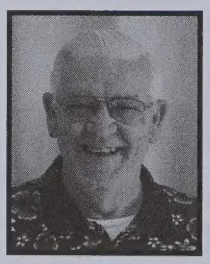


*I am the most charming guy at Universal.* **Grayson**

**Kim**
***Office***

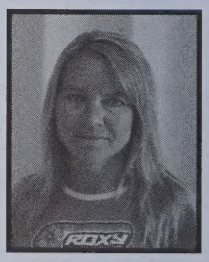
**Brandy**
***Office***

**Cathy**
***Office***

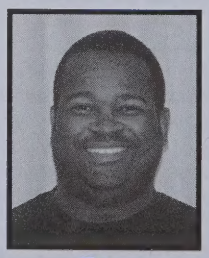


**Al**
***Office***

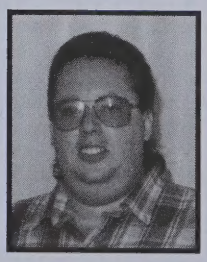
**Julie**
***Office***



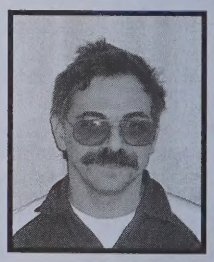
**Sarah**
***Office***



**Ben**
***Receiving***



**Leonard**
***Service***
*WB8ZKI*



**Toni**
***Service***
*KC8ASF*

Visit **www.universal-radio.com** for more neat Universal and customer cat photos!

## UNIVERSAL RADIO COMPANY POLICIES

- **PAYMENT:** We accept Visa, Mastercard, Discover, money orders, cashiers checks and personal checks. Phone order customers please be ready to provide card number, expiration, issuing bank, billing and shipping address plus home & work phone. We request this information for your protection. Personal checks and money orders require time to clear from unestablished customers and/or for large purchases.
- **MINIMUM ORDER:** We have no minimum. Your order is important to us whether it is for $5 or $500.
- **SHIPPING:** We ship most in-stock items within 48 hours (UPS Next Day and Second Day Air orders are shipped within 24 hours). Our normal method of shipment is UPS surface for equipment and UPS or Priority mail for books. We do not ship C.O.D. We ship Monday through Friday. You may request shipment by other means such as UPS Next Day Air, UPS Second Day Air or Air Freight for export orders. Equipment is packed very carefully and sent insured. Please provide us with a full shipping address. UPS cannot ship to a Post Office box. Flatrate shipping amounts are for the continental U.S.A. only. We can provide shipping quotes for international customers.
- **PRICES:** **Prices and specifications are subject to change!** Prices shown are accurate at printing time. We are not responsible for typographical errors. We suggest you call to confirm prices on larger items. Please call toll free: 800 431-3939. For technical questions please call: 614 866-4267.
- **WARRANTY SERVICE:** Our service department is authorized to perform warranty work on Kenwood, Icom, Yaesu, JRC and other major lines. However, we do not perform warranty repairs for all brands. If you are not sure please call us. Copy of receipt must accompany returns for warranty repair.
- **ALL REPAIRS:** Please contact Universal for a service authorization number **prior** to shipping your service item. When sending in a product for service, please "double" box it carefully and ship it insured for your protection. Please include a note clearly describing the problem, how you wish the item returned and how you wish to pay for the service. Package your radio properly. Universal is not responsible for merchandise damaged in shipment. Our service rate is $60 per hour (½ hr. minimum).
- **BACK ORDERS:** Universal carries an extensive inventory to minimize "back ordered" items. Because of manufacturer shortages, backorders do occasionally occur. You may cancel any backordered item at any time for any reason and receive a prompt and full refund. On credit card orders we will not bill your card until we actually ship.
- **RETURNS:** Returned items must be received by us in original, as shipped, condition including the original box, manuals, accessories, copy of sales receipt and warranty card. Note: Do not send in the warranty card until after 10 days, and you are certain that the product will suit your needs. Returns must be within **14 days** of purchase. Returned items are subject to a 15% restocking fee. Please contact us for a return authorization number. Shipping is not refundable. Outdoor antennas, rotors, headphones, software and custom cables are not refundable.
- **FOREIGN ORDERS:** Foreign orders must be payable in U.S. dollars. You may use Visa, Mastercard, JCB, Discover card, postal money order or bank check drawn on a U.S. bank with transit numbers imprinted on the bottom of the check. Shipping amounts in this catalog are for the U.S.A. only. We can provide shipping quotes. Some items are not available for export. We typically sell the North American version of radios and most are *not* CE approved. Most manufacturer's warranties are **not** valid outside the U.S.A. The customer is responsible for any import duties, custom charges and destination fees. Larger foreign orders must be shipped by UPS Air, FedEx or DHL (not postal except to Canada).
- **DAMAGED SHIPMENTS:** If you receive a damaged parcel from UPS, note this with the driver and refuse the shipment. It will be returned to Universal and we will replace it for you at no additional cost.
- **COUPONS:** Many amateur manufacturers run coupon promotions. Universal will accept and can supply these discount coupons. Contact Universal to see what coupons are currently available.

## TO PLACE AN ORDER:

**Phone:** **800 431-3939 Orders & Prices**
**614 866-4267 Technical Info.**
We accept phone orders Monday through Friday from 9:30 A.M. to 5:30 P.M. Eastern Saturday from 9:30 A.M. to 3 P.M. Eastern

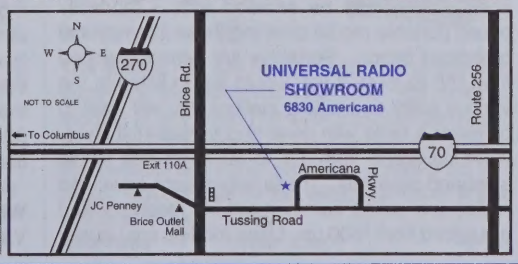
**Mail to:**

**Universal Radio**
**6830 Americana Pkwy.**
**Reynoldsburg, OH 43068-4113**

**FAX:** **614 866-2339 24 Hour FAX**
**E-mail:** **dx@universal-radio.com**

## SHOWROOM HOURS:

| Sun | Mon | Tue | Wed | Thr | Fri | Sat |
|---|---|---|---|---|---|---|
| Closed | 10-5:30 | 10-5:30 | 10-5:30 | 10-7:00 | 10-5:30 | 10-3:00 |




## FLAT RATE SHIPPING

Our simplified flat rate shipping for U.S.A. customers (except AK, HI, PR) is:

| | |
|---|---|
| Up to $50.00 | $4.95 |
| $50.01 to $100.00 | $6.95 |
| $100.01 to $500.00 | $9.95 |
| $500.01 to $1000.00 | $14.95 |

Flat-rate charges are based on the total order of the initial shipment. The order total is pre-coupon and pre-tax. The flat-rate charges include adequate insurance. Call for orders over $1000.

## USED LIST

To receive our monthly list of used equipment please send us one or more **self-addressed stamped envelopes.** Our used gear is checked in our service shop and carries a 60 day limited warranty. Our used list may also be viewed at:

**www.universal-radio.com**

## PURCHASE

If you have equipment you are not using, why not turn it into cash? Universal will purchase good clean used equipment. Please write us, and let us know what you have to sell.

## "DEMO" SALE

Universal will not sell returned or demonstrator units as new! From time to time we have such items and can usually offer them at up to 20% off our regular price. Please call to check availability.

## TRADE-INS

For trade-in quotes, please call or write us listing the items you wish to trade including any optional accessories. Indicate condition and whether you still have the original box and manual. Universal will accept trade-ins towards: new, used, higher or lower value equipment. We accept trade-ins from within the U.S.A. only. Please allow seven days for the trade-in evaluation.

## SHIPPING TO UNIVERSAL

Please contact Universal for an authorization number **prior** to shipping your service, return, purchase or trade-in item. When you ship your equipment it is important that it is packaged properly. Use the original box and packing material if possible. If you do not have the original box, wrap the equipment well with bubble wrap then place this in a box with adequate packing material. All equipment should then be placed in a **second box** with packing material to help ensure its safe arrival to us. Be sure to insure your package for its value. Universal Radio will not be responsible for equipment that is damaged in shipment.

## GIFT CERTIFICATES

Gift certificates are available in any amount. When ordering a gift certificate indicate *your* name and address **plus** the recipient's name & address.

**Visit us on the web:**
**www.universal-radio.com**

## INTRODUCTION TO SHORTWAVE

Listening to shortwave, or *world band*, radio is an exciting and educational form of entertainment. With a moderate investment, anyone can listen to a variety of broadcasts from around the world.

### WHAT IS SHORTWAVE RADIO?

The standard AM broadcast radio band extends from 540 to 1700 kHz. Shortwave radio starts where the standard AM band ends and extends to 30000 kHz or 30 MHz (1000 kHz = 1 MHz). Unlike medium wave signals, shortwave signals will reflect (refract) off the invisible layer above the earth called the ionosphere. While worldwide shortwave reception can occur during the day, best reception is usually during the evening.

### WHAT CAN I HEAR?

The shortwave spectrum is vast. There are potentially thousands of stations that can be heard. The major types of stations are:

**International Broadcast Stations**

Every major country in the world, as well as many small countries, have English transmissions that can be heard in North America. These English broadcasts can be anywhere from 1/2 hour to several hours in length. Many countries beam their transmissions directly to N. America to enhance reception for Canadian and American listeners. Some of the easier English broadcasts to hear come from:

| | |
|---|---|
| BBC London | Voice of Russia |
| RNE Madrid | Radio Sweden |
| Radio Tirana | HCJB Quito |
| Radio Bulgaria | Voice of America |
| Radio Japan | China Radio Intl. |
| Vatican Radio | Flanders Today |
| Radio Canada | Radio Netherlands |
| Radio Prague | Channel Africa |
| RAI Rome | Radio Australia |
| DW Bonn | Radio Budapest |
| Radio Austria | Radio Havana |
| Radio Korea Intl. | Voice of Turkey |

These and other stations design their programs for international audiences. There is an even greater number of regional and local shortwave stations that broadcast to their native populations. These lower powered stations typically transmit in the local language. A variety of interesting programming and music can be heard from these stations, especially from S.America, Africa and the Pacific.

**Radio Amateur Stations (HAMS)**

There are over 1,600,000 licensed amateur radio operators all over the world. Listening to hams can be interesting and a good way to learn more about ham radio. Hams are assigned to a different set of frequencies than the international broadcasters. If you want to listen to amateur stations, you will need a "general coverage" receiver. In order to transmit greater distances and efficiently use their allocated frequencies, hams transmit in a special voice mode called single sideband (SSB) and also Morse code. Again, it is important to select a radio capable of receiving these modes. Our staff will direct you to radios best suited for this.

**Citizen Band (CB)**

CB stations can be heard on most general coverage receivers. CB transmissions can be found between 26 and 28 MHz.

**Utility Stations**

If you subtract from the shortwave spectrum all the international broadcasters, HAM and CB stations, you will be left with a large number of stations loosely labeled "utility stations." These are commercial, government, military and research stations whose transmissions are not designed for general audiences. Some types of utility stations:

*International Aeronautical*

International commercial aircraft communicate with distant air centers using shortwave radio. It would not be surprising to hear an AirFrance jet talking to Santiago Control, or a JapanAir flight working Anchorage Control. We are fortunate that the international aeronautical language is English!

*Maritime Stations*

Shortwave radio remains a secondary link between ships at sea and land. There are hundreds of coastal stations and a nearly endless number of ships which can be monitored on a shortwave radio capable of SSB and Morse reception. Listening to ship-to-shore channels and distress frequencies can be particularly interesting.

*Military Stations*

While most "sensitive" military traffic is sent via satellites or encrypted, numerous military transmissions can be heard and identified. The following navies can easily be heard with a communications receiver: American, French, S. African, British, Argentine and New Zealand.

*Time Stations*

Many countries have stations which send out very precise time transmissions. Most include voice identifications and many can be heard in the USA.

*Miscellaneous*

There remain a number of stations that do not fall neatly into the previous categories. Illegal "bootleg" stations can be heard from time to time. Central America hosts several "clandestine" stations run by various rebel factions. They can be heard in the U.S. when they are not being jammed. There are a number of stations which transmit series of numbers without identification. While they are easy to hear, no one has conclusively determined their intent. Even some Soviet and American satellites in low orbit can be monitored.

### WHAT KIND OF EQUIPMENT DO I NEED?

The answer depends on what you want to hear. If the international broadcast stations are your main interest, you may be satisfied with a modestly priced portable model covering these international broadcast bands. Portables are generally priced from $50 to $500. If you would like to listen to the various utility or amateur stations you will want to consider a radio with general coverage (full shortwave coverage from 1.7 to 30 MHz) and single sideband capability. These larger more advanced radios are called communications receivers and are priced from $500 up. Used models are usually in stock at Universal, and can afford a considerable savings. Contact us for a copy of our used list.

### WHAT DO I USE FOR AN ANTENNA?

Good shortwave reception is possible with a very modest antenna. Portables include a whip antenna which will work quite well. Many portables and all communications receivers provide an external antenna jack (or terminal). Many listeners simply attach a 20 to 40 foot length of regular insulated wire to this jack and then stretch it across the room. This will yield surprisingly good results. However, if you can string the wire outdoors to a tree or pole, still better reception will result. Universal can provide the wire, insulators, *Coax-Seal* and lead-in cable for your antenna. Other more advanced or specialized antennas are also available.

> ***Caution:*** *Avoid overhead utility lines when stringing outdoor antennas. Contact with overhead lines can cause electrocution. Outdoor antennas should be grounded to help prevent lightning damage. If you are new to antenna construction please request a free copy of our "Antenna Safety Advisory".*

### HOW DO I KNOW WHERE TO TUNE?

One of the most exciting aspects of shortwave listening is simply tuning the dial and discovering stations from all ends of the earth. However, there are times when you will want to tune a particular country, perhaps because of an important event occurring there. Two excellent books for the shortwave listener are the *Passport to World Band Radio* and the *World Radio TV Handbook*. Both of these annual publications will guide you to the proper frequency. If you want to hear the exciting "utility" stations, the book *Guide to Utility Stations* is a "must." There are a number of excellent monthly publications on shortwave listening including: *Popular Communications*, *Monitoring Times* and the *NASWA Journal*.

### WHAT IS U.T.C. or G.M.T. TIME?

In order to avoid the confusion of many time zones, hams and international broadcasters always refer to time at the zero meridian (which runs through Greenwich, England). This time zone is five hours ahead of Eastern Standard Time (4 hours ahead of Eastern Daylight Time). This 24 hour format is referred to as Coordinated Universal Time (UTC). For example 4:00 P.M. EST = 21:00 UTC.

### WHAT IS THIS I HEAR ABOUT "QSLs"?

Most international broadcast stations like to hear from their listeners. If you send a "reception report" to a foreign broadcast station they will send you a confirmation of your reception in the form of a postcard called a "QSL". They also will usually send you a program guide and information about their country. A reception report should include the date and time you heard the station (in UTC), the frequency heard, reception quality and 15 to 30 minutes of program content to validate reception. Also tell them how you liked the program!

### WHERE CAN I LEARN MORE?

Visit ***www.DXing.com*** on the worldwide web.

## etón E1 XM

The **etón E1 XM** (originally announced as the Grundig Satellit 900) is the world's first radio that combines AM, FM, shortwave and XM Satellite radio into one ultra high-performance unit. In development for nearly ten years, in collaboration with RL Drake Company and XM Satellite Radio, the E1 is simply the finest full-sized portable in the world. The E1 is an elegant confluence of performance, features and capabilities. The look, feel and finish of this radio is superb. The solid, quality feel is second to none. The digitally synthesized, dual conversion shortwave tuner covers all shortwave frequencies. Adjacent frequency interference can be minimized or eliminated with a choice of three bandwidths [7.0, 4.0, 2.5 kHz]. The sideband selectable Synchronous AM Detector further minimizes adjacent frequency interference and reduces fading distortion of AM signals. IF Passband Tuning is yet another advanced feature that functions in AM and SSB modes to reject interference. AGC is selectable at fast or slow. High dynamic range permits the detection of weak signals in the presence of strong signals. All this coupled with great sensitivity will bring in stations from every part of the globe. Organizing your stations is facilitated by 500 user programmable presets with alpha labeling, plus 1200 user definable country memories, for a total of 1700 presets. You can tune this radio many ways such as: direct shortwave band entry, direct frequency entry, up-down tuning and scanning. Plus you can tune the bands with the good *old fashioned* tuning knob (that has *new fashioned* variable-rate tuning). There is also a dual-event programmable timer. Whether you are listening to AM, shortwave, FM or XM, you will experience superior audio quality via a bridged type audio amplifier, large built in speaker and continuous bass and treble tone controls. Stereo line-level output is provided for recording or routing the audio into another device such as a home stereo. The absolutely stunning LCD has 4 levels of backlighting and instantly shows you the complete status of your radio.

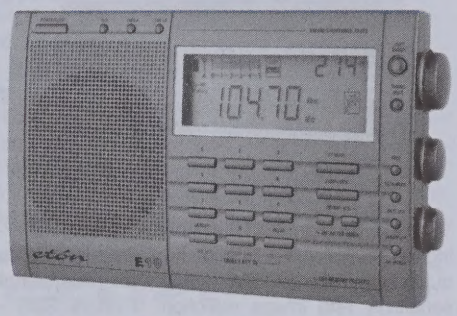
Many receiver parameters such as AM step, FM coverage, beep, kHz/MHz entry etc., can be set to your personal taste via the preference menu. The E1 has a built in telescopic antenna for AM, shortwave and FM reception. Additionally there is a switchable antenna jack [KOK] for an external antenna. Universal also offers a PL259 to KOK antenna jack adapter (*#1052* $14.95) as well as a sturdy angled lucite radio stand (*#3873* $16.95).

The E1 comes with an AC adapter or may be operated from four D cells (not included).
13.1"L x 7.1"H x 2.3"W Weight: 4lbs. 3oz.

**E1 XM** *Order #0101* **$499.95**

**Note:** The XM antenna module CNP1000 and XM subscription are sold separately. Activation and monthly subscription fee required for XM.

## etón E10

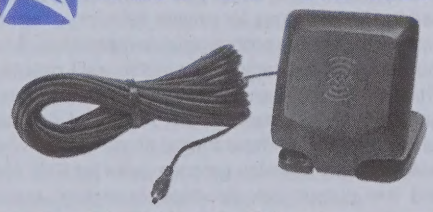


The **etón E10** is a portable digital radio covering AM, FM and shortwave. The AM band may be tuned in 9 or 10 kHz steps and shortwave in 1 or 5 kHz steps. Getting around the bands is easy with: manual tuning, keypad entry, scanning or direct frequency entry. You can store up to 550 of your favorite stations or use the ATS (Auto tuning system) for automatic memory storage of AM and FM stations. Manual tuning my be set for slow or fast rate. The built in 24 hour clock has two turn-on timers and a sleep function. FM stereo is provided to the earphone jack and stereo or mono may be switch selected. There is also a Hi/Low tone control. Other refinements include: backlit LCD, wide/narrow bandwidth, external SW/FM antenna jack and flip stand. The etón E10 also provides two very special features. The first is called IF SET. This shifts the radio's Intermediate Frequency to minimize interference during shortwave reception. The second new feature is Antenna Trim. Rotating the antenna trimmer allows the efficient "matching" of the antenna to the radio. These two features were previously only available in advanced table top shortwave radios. The controls are easy to operate. The E10 may be system programmed to your personal preferences and geographic location. 7.5 x 4.5 x 1.25 inches. 1.3 Lbs.

The E10 operates from 4 supplied rechargeable 1100 mAh Ni-MH AA cells. The AA cells can be charged inside the radio with the supplied AC wall charger. Includes manual, wrist strap, protective case, wind-up antenna, AC adapter and ear buds.

**E10** *Order #0110* **$129.95**

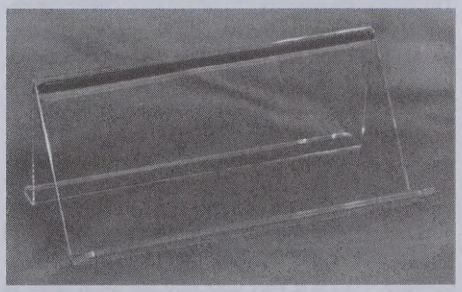
## AUDIOVOX CNP1000



The Eton E1 is XM ready. This means you may purchase the Audiovox CNP1000 XM antenna module at any time. The CNP1000 can be moved from one E1 to another E1, or even to some other compatable electronic products. It has a 25 foot cable. (An optional 50 foot extension cable is also available *#0393* $17.95.)

**CNP1000** *Order #0401* **$47.95**

## UNIVERSAL LARGE STAND



Clear radio stand to hold E1 at optimum viewing and operating angle. It is 12 inches wide and was designed expressly for the E1.

**STAND** *Order #3873* **$16.95**

## etón E5

The **etón E5** is a world class portable radio covering long wave, AM, FM and shortwave. It features dual conversion AM/SW circuitry for exceptional sensitivity and image rejection. It offers SSB - Single sideband reception. It has an amazing 700 channel memory capacity with memory scan and auto tuning storage. The 24 hour clock features alarm and sleep timer functions. Tuning is via auto-scan, manual scan, conventional tuning knob or direct keypad entry. FM stereo is supported to the mini earphone jack and the LCD is backlit. Other refinements include: Line Output, Local/DX Switch, Wide-Narrow selectivity and external SW antenna jack. The E5 operates from four AA cells (not supplied) or the supplied AC wall adapter. The AC adapter can also recharge NiMH AA cells (not supplied) while in the radio. (Do not attempt to recharge other types of AA cells). This radio also includes a manual, wrist strap, protective case, wire antenna and ear buds. 6.675 x 4.125 x 1.125" 12.2 oz. One year limited warranty.
List $169.95 *Order #0055* **$149.95**

## GRUNDIG YB-400PE

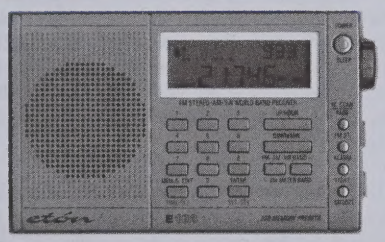
The legend of the famous Yacht Boy 400 lives on in this latest model the **YB-400 Professional Edition**. Larry Magne, Editor-in-Chief of ***Passport to World-band Radio*** said the YB-400PE is "... the best compact shortwave portable we have tested." The Grundig YB-400PE is simply our best selling radio here at Universal. We think the reason is value. Dollar for dollar no other radio offers this much performance and so many features. Coverage is complete including long wave (144 - 353 kHz), AM band and shortwave from 1711 to 30000 kHz. FM stereo is provided to the headphone jack. A thumb wheel knob on the side of the radio provides smooth single sideband (SSB) tuning. The illuminated digital display provides tuning resolution at 1 or 5 kHz on shortwave. Two bandwidths are featured. The narrow position affords maximum selectivity, or the wide position may be chosen for best audio fidelity. This is a useful feature on today's crowded shortwave bands where stations are near each other in frequency. The keypad will quickly get you to any frequency or store up to 40 of your favorite stations in the presets. The presets may be accessed directly or you can scan through them by using the radio's second set of Up/Down buttons. The YB-400PE can also frequency search. The dual digital clock is visible while the radio is playing. Other refinements include: snooze and sleep buttons, lock, High/Low tone switch, Local/DX switch, and 9/10 kHz MW scan selection. External jacks are provided to earphone (3.5 mm), antenna (3.5 mm) and 9 VDC input. The YB-400PE comes with: Grundig brand AC adapter, stereo earbuds, wind-up antenna, *Owners Manual,* and vinyl carry case. Requires six AA cells (not supplied). The cabinet has a stunning titanium colored finish. 8"Wx5"Hx1.5"D. 1 Lb. 5 oz. (203x127x38 mm). One year limited warranty. **YB-400PE** *Order #0400* **$129.95**

The YB-400PE is also available factory reconditioned. These reconditioned radios have been carefully checked and remanufactured as needed and include, box, all originally supplied accessories, manual and the regular one year Grundig limited warranty. **RECON YB400** *Order #4073* **$99.95**

### G4000A

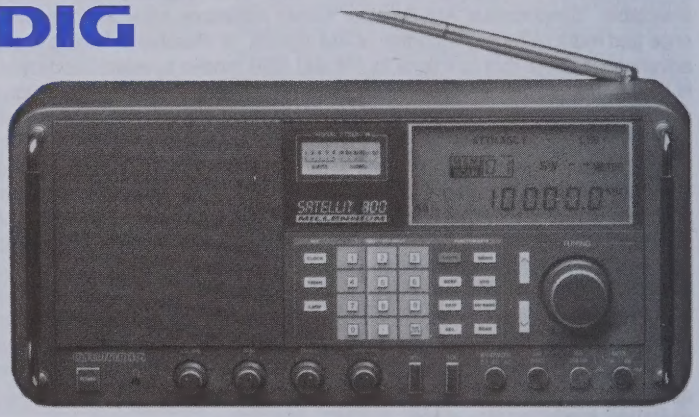
The **Grundig G4000A** is virtually the same radio as the YB-400PE, but features an upgraded carry case that can be folded to support the radio at an angle. **G4000A** *Order #4000* **$149.95**

## etón E100



The **etón E100** is a stylish, compact portable digital radio covering AM, FM and shortwave. You can store up to 200 of your favorite stations. The built in clock has two turn-on timers and a sleep function. FM stereo is provided to the earphone jack and stereo or mono my be switch selected. There is also a Hi/Low tone control. Other refinements include: tuning bargraph, keypad entry, backlit LCD and flip stand. The display can simultaneously show tuned frequency and time. This is a continuous coverage shortwave radio tuning AM, FM and all shortwave frequencies from 1700-30000 kHz. You can quickly change meter bands by just pressing "SW Meter Band" keys up or down. FM reception is 87 to 108 MHz. The E100 may be programmed to personal preferences and geographic location. The controls are easy to operate. This is a very cool and compact radio at only 4.75 x 3 x 1.1 inches. Silver color. With earphone and 3.0 VDC jacks. Includes wrist strap, protective case, two AA cells and ear buds.
**E100** *Order #0100* **$99.95**

## GRUNDIG SATELLIT 800



The Grundig Satellit legend continued with the **Satellit 800**. You will immediately appreciate the smooth flowing, full size design and functional control panel. The tuner receives all longwave, AM broadcast band, all shortwave frequencies, the FM broadcast band and even the VHF aeronautical band (118-137 MHz). With Grundig you expect great rich audio and the 800 delivers with a large speaker, strong amp and separate bass and treble controls. Grundig thoughtfully includes a set of high quality, full sized, padded headphones for private listening. Tuning is available via the large size manual knob, keypad entry or by 70 user programmable memories. A large illuminated 6 by 3½ inch multifunction LCD shows the status of the radio. A synchronous detection circuit reduces fading and increases intelligibility. Three filters (6, 4 and 2.3 kHz) allow you to select the optimum bandwidth. Other features include: Analog S-Meter, carry handle, AGC and Attenuator buttons, ultra-fine 50 Hz Single Sideband (SSB) tuning and dual 24 hour format clock timers. The over size telescopic whip antenna pulls in incredibly well, but there are also antenna jacks for SW, AM, FM and the VHF air band. An external speaker jack and line output jack (for tape recording) are also included. Grundig supplies a set of full-fidelity headphones for private listening. The Satellit 800 comes with an AC 110 VAC power supply or can also be operated from six D cells (not supplied). This radio will please both the serious DXer and the program listener. One year limited warranty. 20.9 x 9.25 x 8.25 inches 14.5 Lbs. This model is discontinued.

**Sold out new, but available reconditioned**

The Satellit 800 is still available factory reconditioned. The reconditioned Satellit 800s have been carefully checked and remanufactured by R.L. Drake Co. as needed and include, box, all originally supplied accessories, manual and the regular one year Grundig limited warranty.
**RECON SAT800** *Order #0888* **$419.95**

# GRUNDIG YB-550 PE

The incredibly attractive **Grundig YB-550PE** combines form and function to offer an excellent shortwave experience. Six tuning methods are available to make tuning the bands easy and quick. Enjoy AM, FM, FM Stereo (to earphone jack) and full coverage shortwave from 1710-30000 kHz. Direct keypad frequency entry is possible or Up-Down tuning is available to surf the bands. A bar-graph tuning meter puts you exactly on frequency. 100 memories store your favorite stations. The built in clock can wake you to the radio audio or a buzzer. The large backlit LCD shows time and frequency. Comes with a carry case. 3.5 x 5.75 x 1.375 inches 10 oz. The PPI0440 AC adapter is optional.

| | | |
|---|---|---|
| **YB-550** | *Order #0550* | **$79.95** |
| **PPI-0440-UL** | *Order #2413* | **$14.95** |

# GRUNDIG FR200

Be prepared and aware with the **Grundig FR200** emergency radio. This affordable analog portable receives AM (530-1710 kHz), FM 88-108 MHz and shortwave in two bands: 3.2-7.6 and 9.2-22.5 MHz. The FR200 operates from 3 AA cells (not supplied), 4.5 VDC or via the wind-up generator. This radio features analog tuning with a Fine Tune knob. It has an integrated carry handle and bright emergency light source. Has mini earphone jack and black canvas case. A great value!
An optional GPU3504 AC adapter *(#0164)* is available for $9.95.

| Order | Model | Price |
|---|---|---|
| *#2200* | **FR200 SAND** | **$39.95** |
| *#0983* | **FR200 BLUE** | **39.95** |
| *#0987* | **FR200 RED** | **39.95** |
| *#0767* | **FR200 BRONZ** | **39.95** |
| *#0790* | **FR200 WHITE** | **39.95** |
| *#0814* | **FR200 YELLOW** | **39.95** |

# etón FR250

Be prepared and aware with the **etón FR250** emergency radio. This affordable portable receives AM, FM 88-108 MHz and seven spread shortwave bands. This radio can be powered from four different sources: the built-in rechargeable Ni-MH rechargeable battery, from 3 AA batteries, AC adaptor (not included) and from the dynamo crank. There is also a built-in triple white LED light source and mini earphone jack. A fine-tuning control knob is superimposed on the main tuning control knob for precise tuning. The FR250 is not only perfect for emergencies, but also for camping, hiking, or anywhere you need to stay in touch. *Order #0250* **$49.95**
There is an optional GPU3504 AC adapter.
**GPU3504** *Order #0164* **$9.95**

## G2000A Porsche Design

This stunning **G2000A** AM, FM, shortwave radio was designed by F.A. Porsche of Germany. Shortwave tunes 2.3-7.4 and 9.4-26.1 MHz via Up/Down buttons, auto search, direct keypad entry or via 20 memories. The digital quartz clock, with sleep timer, wakes you to a beep or radio. Features include: lock button, 9/10 kHz MW step and stereo/mono switch. With gorgeous, leather snap-on case, stereo earbuds and *Grundig Shortwave Guide*. Requires three AA cells (not supplied) or 4.5 VDC. 5.5 x 3.5 x 1.3 inches.

| | | |
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| List $99.95 | *Order #3685* | **$79.95** |
| AC adapter | *Order #1510* | **$12.95** |

## MINI WORLD 100 PE

Put the world in your pocket. The affordable **Mini World 100** analog portable receives AM (530-1710 kHz), FM stereo and six shortwave bands: 5.8-6.4, 6.9-7.5, 9.4-10, 11.65-12.15, 15-15.65 and 17.5-18.14 MHz. An LED tuning indicator is featured. The Mini World 100 includes a case, belt clip and earbuds. Requires two AA cells (supplied). Only 2.7 x 4.2 x 0.8 inches 6 ounces. What a great value!

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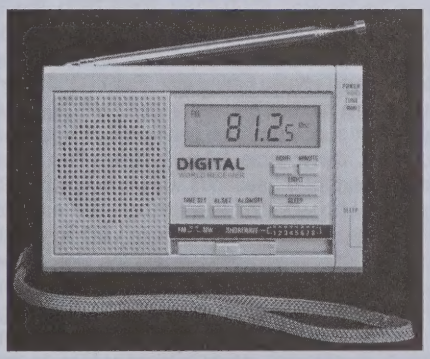
| List $39.95 | *Order #4040* | **$29.95** |

## G1000A



The **Grundig G1000A** insures you will never be out of touch. Compact, yet powerful the G1000A receives AM, FM and eight shortwave bands: 5950-6200, 7100-7600, 9200-9900, 11600-12200, 13570-13870, 15100-15800, 17480-17900 and 21450-21850 kHz. The G1000A is easy to use with a manual tuning knob on the side of the radio. It features a backlit digital display, radio alarm, sleep function and stereo headphone jack. Comes with protective black case, two AA cells, *Grundig Shortwave Listening Guide* and stereo ear buds. 4.5 x 3 x 1.13 inches. 7 oz

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| **G1000A** | *Order #1010* | **$49.95** |

# GRUNDIG M300PE

The **Grundig M300PE** Mini World covers: AM and FM plus seven shortwave bands (49, 41, 31, 25, 22, 19, and 16 meters) and fits in your pocket. The digital display shows frequency, 12 hour time and activation of the alarm and sleep timer. It operates on two supplied AA cells. A telescopic antenna is featured for AM and SW reception and the AM band uses an internal ferrite loop antenna. The Mini 300 comes with earphones, carry strap and pouch. 3.8 x 7 x 1.2 inches 4 oz. (65x170x23 mm). All Grundig shortwave radios feature a one year limited warranty. This radio is available in five cool colors.

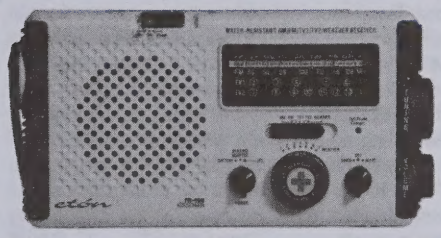
| Order | Model | Color | Price |
|---|---|---|---|
| *#0906* | **MINI300 BLUE** | Metallic Blue | **$29.95** |
| *#0921* | **MINI300 RED** | Metallic Red | **29.95** |
| *#0884* | **MINI300 BNZ** | Metallic Bronze | **29.95** |
| *#3300* | **MINI300 WHT** | Metallic Pearl White | **29.95** |
| *#0892* | **MINI300 GLD** | Yellow Gold | **29.95** |

## etón S350DL

The **etón S350DL** deluxe model is similar to the original Grundig S350, but adds stereo output to the earphone jack. Enjoy AM, FM and continuous shortwave from 2.9 - 27.4 MHz. A special AM-SW circuit reduces drift. Big 4¾" speaker. Jack for external antenna. Includes an AC adapter or can operate from 4 AA *or* 4 D cells (not supplied). Available with a red, black or silver case.

| | | |
|---|---|---|
| **S350 DL RED** | *Order #4704* | **$99.95** |
| **S350 DL BLK** | *Order #4705* | **$99.95** |
| **S350 DL SIL** | *Order #0043* | **$99.95** |

## etón FR350



Be prepared and aware with the **etón FR350** emergency radio. This affordable portable receives AM (530-1710 kHz), FM 88-108 MHzand the seven major shortwave bands. The shortwave bands are: 5800-6350, 6950-7500, 9350-10050, 11550-12200, 13400-14000, 15000-15700, 17400-18050 and 21200-21950 kHz. This radio has an analog tuning dial. The FR350 operates from a wind-up generator, or 4.5 VDC or 3 AA cells (not supplied). The generator charges the supplied, replaceable NiMH battery. Two turns per second for 90 seconds will provide 40 to 60 minutes of operation. The controls are easy to use. There is also a built-in triple LED light with emergency light source built into the side of the radio. Two of the LEDs are white for illumination, and the third is a blinking red LED for signaling. There is even a loud siren function in this device. The battery compartment allows access to the built-in NiMH pack or for the three optional AA cells. There are jacks on the rear panel for: earphone output, 4.5 VDC input and phone charger output. These jacks are protected under a water resistant rubber flap. The FR350 has the additional capability of recharging certain cell phones. Several common cellular power adapters are included . This radio comes with a black canvas carry case, 4.5 VDC 120 VAC adapter, *Owner's Manual*, and mini *Red Cross Disaster Preparedness Guide*. 8.7 x 4.5 x 2 inches 1.3 Lbs. [Please also see the similar FR400 on page 26].

| | | |
|---|---|---|
| **FR350** | *Order #1350* | **$59.95** |

# SANGEAN

## ATS-909

The **ATS-909** is the flagship of the Sangean line. It packs features and performance into a very compact and stylish package. Coverage includes all long wave, medium wave and shortwave frequencies. FM and FM stereo to the headphone jack is also available. Shortwave performance is enhanced with a wide-narrow bandwidth switch and excellent single side band performance (SSB tuning to 40 Hz steps via fine tuning). Five tuning methods are featured: keypad entry, auto scan, manual up-down tuning, memory recall or manual knob tuning. The alphanumeric memory lets you store 306 presets (260 shortwave, 18 AM, 18 FM and 9 LW plus priority). The 3 event clock-timer displays even when the radio is tuning and has 42 world city zones stored. The large backlit LCD also features a signal strength and battery bar graph. The ATS-909 will display RDS on PL, PS and CT for station name and clock time in areas where this service is available. Also features a record jack and tone switch. Includes AC adapter, carry case, stereo ear buds, preset chart and Sangean ANT-60 roll-up antenna (shown on pg. 34). 8½"x5½"x1½" 2 Lbs. Requires four AA cells.

| | | |
|---|---|---|
| **ATS-909** | *Order #1909* | **$239.95** |

## ATS-606AP

The **ATS-606AP** covers all long wave, AM and shortwave frequencies (153 - 29995 kHz) plus FM stereo. It has digital readout, 1 kHz SW tuning, 54 memories & keypad entry. A dual digital clock-timer alarm shows local and UTC. With auto-scan, dial light, DX and lock switch. An excellent choice for shortwave broadcast listening (no SSB). With: case, earbuds and multilingual owner's manual. This enhanced "AP" version also includes the ANT-60 wind-up antenna (shown on page 34) and multi-voltage 110-230 VAC adapter. Requires 3 AA cells. 5¾"x3½"x1¼" 1 Lb.

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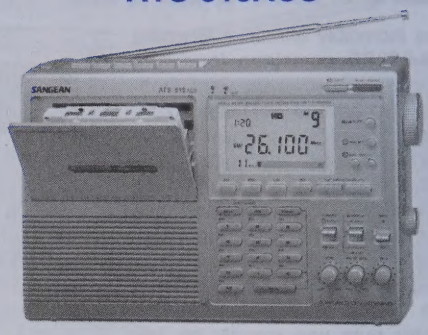
| **ATS-606AP** | *Order #3319* | **$119.95** |

## ATS-818ACS



You have been waiting for a quality digital world band radio with a built-in cassette recorder? You have it in the exciting **Sangean ATS-818ACS**. This no-compromise receiver has full dual-conversion shortwave coverage (1.6 - 30 MHz) plus long wave, AM and FM (stereo to headphone jack). A BFO control is included for smooth SSB or CW reception. A big LCD display with dial lamp shows: frequency (1 kHz on SW), 24 hour time, battery indicator and signal strength. The receiver features an RF gain, tone, external antenna jack, wide-narrow selectivity, keypad entry, manual tuning knob, plus 54 memories (18 for shortwave). Includes 120 VAC adapter and wave guide. The recorder has a built-in mic and auto-shutoff. Requires four D cells and three AA cells (not supplied). 11¼" x 7" x 2½". Titanium colored.

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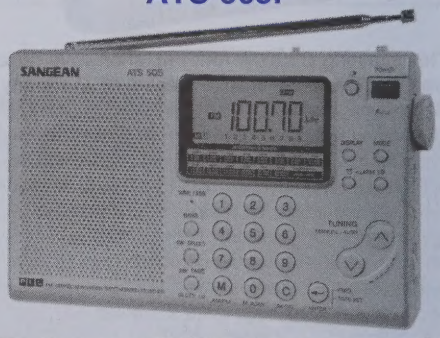
| **ATS-818ACS** | *Order #1069* | **$199.95** |

## ATS-505P



The **Sangean ATS-505P** covers long wave 153 - 279 kHz, AM 520-1710, shortwave solid from 1711-29999 kHz plus FM 87.5-108 MHz. The backlit display can show either the frequency or the time (12/24 format). Tune via the tuning knob, Up-Down buttons, automatic tuning, keypad entry or from the 45 memories. The ATS-505P even tunes Morse code and single sideband (SSB) using a separate Clarify knob on the side of the radio. You may press in the tuning knob to select between normal and fine tuning (1 or 10 kHz on AM/LW and 1 or 5 kHz on SW). Other features include: FM stereo to headphone jack, 9/10 kHz AM step, beep on/off, dial lock, stereo-mono switch, alarm by radio or buzzer, auto-scan, auto memory, sleep-timer, tune LED, tilt-stand, external antenna input and 6VDC jack. Includes: AC adapter, case, earphones, ANT60 wind-up antenna and wave guide. Titanium matte finish. 8.5"x5.3"x1.6" (214x128x39 mm) 1 Lb. 8 oz (840 g). Requires four AA cells (optional).

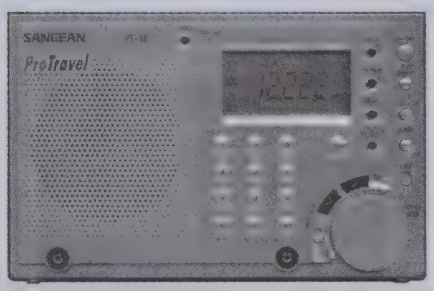
| | | |
|---|---|---|
| **ATS-505P** | *Order #3505* | **$119.95** |

## ATS-404

The **Sangean ATS-404** coverage includes AM, FM and 14 SW bands, or in continuous mode from 2.3-26.1 MHz. Tune via the up-down buttons, automatic tuning, keypad or from the 45 memories. The LCD shows frequency or the 12/24 hour time. Other features include: FM stereo to headphone jack, low-battery indicator, dial lock, 9/10 kHz MW step, dial lamp, stereo-mono switch, alarm by radio or buzzer, auto-scan, sleep-timer tune LED, tilt-stand and 6VDC jack. With: case, earphones and WaveGuide. Silver-gray finish. 6½"x4"x1½" 10 oz. Requires 4 AA cells (not supplied) or optional *#1665* ADP808 AC adapter $12.95.

**ATS-404** *Order #2181* **$79.95**

## PT-80




The **Sangean PT-80** ProTravel is a compact digital radio featuring longwave, AM, FM plus continuous shortwave coverage. The PT-80 employs a dual conversion PLL synthesized circuit yielding excellent sensitivity and image rejection. It offers five tuning methods: direct keypad frequency entry, autoscan, manual tuning, memory recall and rotary knob tuning. 45 memory presets are available with ATS Auto Tune System. A dial lock is featured. There is an indicator on the liquid crystal display that tells you whether our not you are tuning within a shortwave broadcast band. Single sideband (SSB) shortwave reception is supported. A SSB fine tuning control on the right side panel allows for accurate SSB clarification. The left side of the radio has switches for Stereo-Mono and for Local-DX. A dual world time clock (12/24 hour) with alarm, snooze and sleep is featured. The LCD is backlit and there is an external antenna jack for the shortwave band. There is even a way to program five operation preferences (such as time display format, AM channel spacing, etc.). The PT-80 includes: 120 VAC wall adapter, earphones, wind-up antenna and butter-soft leather pouch. Requires four AA cells (not supplied).

**PT-80** *Order #1080* **$159.95**

## MP-40

The **Sangean MP-40** is the radio many shortwave listeners have been waiting for. Finally, a receiver that tunes longwave, medium wave and shortwave with built-in support of DAB, RDS and DRM. Yes, DRM! DAB is form of digital broadcast widely employed in Europe, but not currently in use North America. RDS (Rado Data System) provides information such as station name, song titles and traffic information. DRM (Digital Radio Mondiale) is a consortium of radio and electronics manufacturers from around the world that banded together in the late 1990s to create a universal digital system for the AM broadcasting bands below 30 MHz. The result is FM quality sound via shortwave. The Sangean MP-40 will also include a Secure Data slot for MP3 audio playback from SD cards. This radio also has a clock radio function with selectable radio or buzzer alarm and sleep mode. Other refinements include: USB port, external antenna jack, line and earphone outputs. Operates from 120 VAC 60 Hz or four D cells.

**MP-40** *Order #0040* **T.B.A.**

This device has not been approved by the Federal Communications Commission. This device may not be sold or leased, or be offered for sale or lease, until approval of the F.C.C. has been obtained.

## PT-633

The **Sangean PT-633** *Pro Traveler* is a compact analog radio featuring AM, FM and nine shortwave bands. It makes a great travelling companion featuring a built-in dual time zone 12/24 hour digital clock. The LCD clock is back lit and has a DST (Daylight Savings Time) switch. You can wake to radio or buzzer. Other features include: LED tune indicator, low battery indicator, stereo-mono switch and power lock button. This radio has a jack for an external 4.5 VDC power adapter (not supplied). Requires three AA cells (not supplied). Includes protective carry case and stereo ear buds. 6 x 3.5 x 1.25 inches.

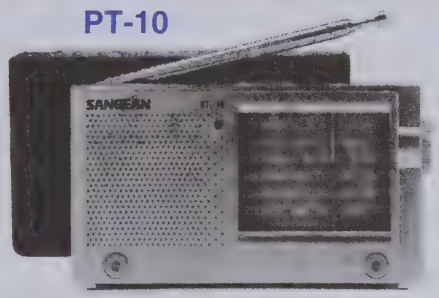
**PT-633** *Order #3633* **$54.95**

## PT-50

The **Sangean PT-50** ProTravel is a compact digital radio featuring AM, FM plus seven shortwave bands: 5900-6200, 7100-7350, 9400-9900, 11600-12100, 13570-13870, 15100-15730 and 17500-17900 kHz. The LCD is backlit and there is a built-in clock that will wake you to radio or buzzer. 12 or 24 hour mode. The rotary knob selects world time zones. There is a Stereo-Mono switch on the side of the radio. Requires two AA cells (not supplied). With snap-off protective case.

**PT-50** *Order #1050* **$79.95**

## PT-10




The very stylish **Sangean PT-10** ProTravel is a compact analog radio featuring longwave, AM, FM and nine shortwave bands. Shortwave bands are: 3900-4000, 5900-6200, 7100-7350, 9400-9900, 11600-12100, 13600-13800, 15100-15700, 17500-17900 and 21400 - 21850 kHz. It includes a LED stereo indicator for precise tuning. There is a Stereo-Mono switch on the side of the radio. The PT-10 has jack for external 3 VDC power adapter (not supplied). Requires two AA cells (not supplied). Includes a butter-soft handcrafted protective leather case that can be snapped on or off.

**PT-10** *Order #3010* **$54.95**

## SG-622

The **Sangean SG-622** is an attractive and affordable analog AM, FM and shortwave radio. The ten shortwave bands cover: 4.5-5.05, 5.8-6.3, 7.1-8, 9.3-9.9, 11.45-12.15, 13.40-14.05, 15.1-15.85, 17.4-18.1, 18.75-19.2 and 21.3-22.1 MHz. This model includes a tuning LED, 2.5 inch speaker, mono mini earphone jack and 4.5 VDC input jack. This radio requires three AA cells (not supplied). Only 6.5 x 3.5 x 1.3 inches. The optional compatible AC adapter is *#1510* Grundig G2ACA.

**SG-622** *Order #3858* **$39.95**
**AC adapter** *Order #1510* **$12.95**

# SONY ICF-SW35

The **Sony ICF-SW35** is a stylish digital portable that covers AM, FM and shortwave from 2250 to 26100 kHz. Tuning is accomplished via Up-Down buttons, 50 presets or automatic frequency scan. The ICF-SW35 features a built-in digital clock with two wake times and 60 minute sleep timer. PLL quartz frequency synthesis and dual conversion superheterodyne circuitry combine to offer solid performance. Step tuning may be set for 1 or 5 kHz on shortwave and 9 or 10 kHz on AM. The ICF-SW35 has: a dial illumination button, sleep button, lock switch, tone switch, attenuator, memory scan and a 2.5" speaker plus a stereo earphone jack. Requires three AA cells (not supplied) or 4.5 VDC. The case is silver in color. Includes Sony shortwave guide, cloth case and wrist strap. Silver colored case. 6.7" x 4.5" x 1.4". 16 oz.
**ICF-SW35** *Order #0135* **$89.95**

## ICF-SW12

The **Sony ICF-SW12** AM, FM, shortwave analog clock radio was really designed with the traveller in mind. World-band coverage: 4.75-5.06, 5.9-6.2, 7.1-7.35, 9.4-9.99, 11.6-12.1, 13.57-13.87, 15.1-15.8, 17.48-17.9 and 21.45-21.75 MHz. It has a sophisticated backlit LCD world clock display. It wakes you to the buzzer. Antennas include a built-in ferrite bar for AM and a convenient telescopic antenna for FM and SW reception. Requires two AA cells (not supplied). 4.38" x 3.13" x 1.2" (111x79x30 mm).
**ICF-SW12** *Order #2022* **$89.95**

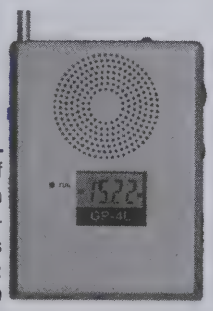
## ICF-SW11

The **Sony ICF-SW11** analog portable covers longwave (153-279 kHz), medium wave, FM and nine shortwave bands: 4.75-5.06, 5.9-6.2, 7.1-7.35, 9.4-9.99, 11.6-12.1, 13.57-13.87, 15.1-15.8, 17.48-17.9 and 21.45-21.75 MHz. Features: 2¼" speaker, LED tune indicator, wrist strap, tilt bar, and stereo earphone jack. Includes *Sony SW Guide*. Requires 2 AA cells (not supplied) or 3 VDC. Titanium colored case 6.4" x 3.7" x 1.4" 12 oz.
**ICF-SW11** *Order #0017* **$49.95**

# ICF-SW7600GR

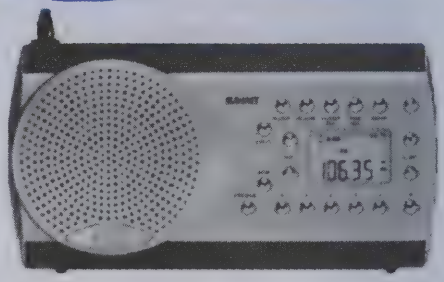
The **Sony ICF-SW7600GR** is a compact, microprocessor-controlled, frequency synthesized general coverage portable receiver. Direct access tuning is provided along with a multifunction LCD digital readout for unsurpassed convenience and accuracy (1 kHz step tuning on SW, MW and LW). Manual and automatic scan tuning are also provided. 100 memories are provided for your favorite stations. The ICF-SW7600GR tunes from 150 to 29995 kHz for solid coverage of longwave, medium wave and shortwave. Smooth single sideband and Morse code reception is now provided through a switch with separate lower sideband (LSB) and upper sideband (USB) positions plus fine tuning thumb-wheel. A special *Synchronous Detector* circuit reduces fading and annoying "beat" frequency interference from adjacent stations as well as distortion due to fading shortwave reception. FM stereo is provided to the mini stereo headphone jack. Advanced features include: dial light, tune indicator, tilt stand, record jack, keypad lock, 24 hour digital clock with dual timer, variable attenuator, 9/10 kHz MW tuning switch, tone switch and external antenna jack. Supplied with: vinyl case, wind-up antenna and *Sony Wave Handbook*. Requires 6 VDC or four AA cells (not supplied). 7½" x 4¾" x 1¼" 22 oz.
**ICF-SW7600GR** *Order #0360* **$159.95**
Compatible, filtered AC adapter (not Sony).
**MW-41-680** *Order #2023* **$19.95**

## GP-4L



The **County Comm GP-4L** is smaller than a pack of cigarettes, but can tune in the world. This amazing radio tunes AM, FM and has two shortwave bands: 5.95-9.95 and 11.65-17.9 MHz. This radio also features a 12 hour format clock with timer function. The buttons to set the clock are on the rear panel. This radio requires 3 - 4.5 VDC or two AA cells (not supplied). The GP-4L comes with earbuds. This latest L model also features a built in bright LED. Here is an inexpensive, yet capable radio that is just right for your emergency kit or on-the-go listening. This rugged little radio even has an aluminum face plate. Only 2.5 x 3.5 x 0.9 inches. (The Grundig PPI0440 AC adapter is optional order *#2419* $14.95)
**GP-4L** *Order #0247* **$21.95**

# Freeplay SUMMIT



The **FreePlay Summit** is a truly self-sufficient radio. It can operate from wind-up dynamo, solar energy, or via its rechargeable battery. It tunes longwave, AM, shortwave from 5.9 to 15.6 MHz and FM. The feature-packed, compact design makes it ideal for a global trek or a trip to the beach. The Summit features dial lock, snooze, 12/24 hour alarm clock and 30 station presets. The AM band tuning may be set for 9 or 10 kHz step sizes. Thirty presets [10 AM, 10 FM, 5 LW, 5 SW] can store your favorite stations. This radio includes a wind-up wire antenna and AC power adapter [110 VAC 60 Hz]. A full AC charge may take up to 24 hours. A full charge by direct sunlight will take approximately 40 hours. Size: 6.8 x 3.5 x 3.1" 1.3 lbs. With multi-language manual.
List $89.95 *Order #3064* **$79.95**

## PLUS

The **Freeplay Plus** will be your information and light source during a power failure. It is the most sought after alternative power, AM, FM, shortwave radio in America. You can charge the built-in NiMH battery pack via the wind-up generator, the solar panel or the optional AC adapter. A fully charged battery will run the radio for over 40 hours. The Freeplay Plus comes with a detachable, 3-white LED light with a magnetic base, making it the perfect combination of essentials you need during a power failure. The Freeplay Plus can go anywhere without the need for any external power. Its superior AM and shortwave reception also makes it an excellent everyday radio. Continuous coverage of ten shortwave bands from 3.0 to 18.1 MHz. Built-in stereo headphone jack (for mono reception). With four ways to power it, the Freeplay Plus almost becomes a perpetual radio. 11" W x 8" H x 8" D. 5 lbs.
**PLUS** *Order #1468* **$99.95**

**Looking for an older shortwave model?**
Please visit our used equipment department at:
**www.universal-radio.com**

KAITO ELECTRONICS INC.

## KA1101

The **Kaito KA1101** is a dual conversion portable radio covering AM, shortwave and FM. This radio comes with 3 Ni-MH rechargeable batteries and the AC adaptor (and charges the batteries automatically while in the radio). AM coverage is from 520-1710 kHz (9 or 10 kHz steps) and shortwave coverage is 3000 to 26100 kHz in two bands. (The FM-L band covers 70.0 - 95.5 MHz for the Japanese FM band and Russian FM band, if traveling in these areas). The radio features 50 memories (10 for SW1, 10 for SW2, 30 for AM/FM/FML). Tuning is via manual up-down buttons and scan plus direct frequency entry via the keypad. The built in digital clock has two alarms, a sleep function and can be set to wake you to beeper or the radio. Other features include: two position tone, lock, wide-narrow selectivity, Local-DX switch and backlit LCD. There is even a light sensor that determines when the LCD needs to be illuminated (when buttons are pushed). There is a line out jack and external antenna jack. A special battery icon shows remaining battery life. The KA1101 comes with: AC adapter, three Ni-MH rechargeable AA cells, protective carry case, wrist strap, stereo ear buds and external wire antenna. One year limited mfg. warranty. Available in silver or gray (shown).

| | | |
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| **KA1101 Silver** | *Order #1101* | **$59.95** |
| **KA1101 Gray** | *Order #2101* | **$59.95** |

KAITO ELECTRONICS INC.

## KA1102

The **Kaito KA1102** is a dual conversion portable radio covering AM, shortwave and FM. AM coverage is from 522-1710 kHz (1/9/10 kHz steps) and shortwave coverage is 3000-29990 kHz in 1/5 kHz steps. Single side band (SSB) mode is available on shortwave with fine tuning. 190 memories are available in 19 banks. A keypad allows direct frequency entry. Auto scan and auto memory is supported. A built in clock has 3 alarms and wakes you to beeper or radio. The large, attractive LCD is backlit and it features a signal strength indicator. There is a DX-Local sensitivity switch. Additionally there is a two position tone switch. There is also a button that selects Wide-Narrow selectivity (or Mono-Stereo while on the FM band). Other refinements include: battery power indicator, lock and sleep. There is an external antenna jack and a stereo earphone jack. This radio comes with three AA Ni-MH rechargeable batteries and an AC adapter. The AC adapter not only works as a DC power source, but it also charges the batteries automatically. With wrist strap, protective carry pouch and stereo earbuds. An Owner's Manual and Operating Guide Sheet are also included. One year manufacturer's limited warranty. Size: 5.7 x 3.7 x 1.2 inches (143x88x29 mm). Available in silver or black.

| | | |
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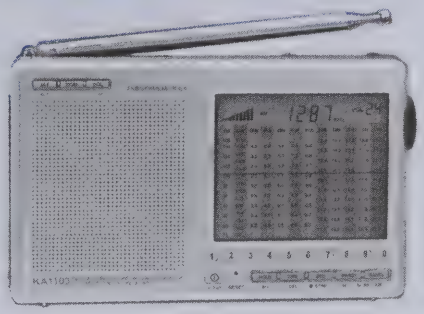
| **KA1102 Silver** | *Order #1102* | **$79.95** |
| **KA1102 Black** | *Order #2102* | **$79.95** |

KAITO ELECTRONICS INC.

## KA1103



The **Kaito KA1103** is a dual conversion portable radio covering 522-1710 kHz (1/9/10 kHz steps) and SW 3000-29990 kHz (1/5 kHz steps). SSB is featured and 190 memories are available in 19 banks plus auto scan and auto memory. A built in clock has 3 alarms and wakes you to beeper or radio. The backlit LCD features a signal strength indicator. There are switches for: DX-Local switch, FM Mono-Stereo, tone switch and Wide-Narrow selectivity. Other refinements include: battery power indicator, lock and sleep. There are jacks for external antenna and stereo earphone. This radio comes with four AA NiMH cells, AC adapter-charger, wrist strap, wire antenna, carry bag, stereo earbuds and Owner's Manual. Only 6.5 x 4.1 x 1.2 inches. In silver or black.

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| **KA1103 Silver** | *Order #0028* | **$89.95** |
| **KA1103 Black** | *Order #0029* | **$89.95** |

## WRX911

The **Kaito WRX911** provides worldwide listening on a budget. This analog portable covers AM, FM and nine shortwave bands: 4.60-5.20, 5.75-6.40, 6.95-7.65, 9.30-9.90, 11.55-12.10, 13.55-13.85, 14.85-15.80, 17.40-18.05 and 21.30-21.95 MHz. The WRX911 is easy to use and fits in your shirt pocket. Requires two AA cells (not supplied) or 3 VDC. With a cloth carry pouch, earbuds and wrist strap. 4.5x3x1 inches. Available in black or blue.

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| **WRX911 Black** | *Order #0911* | **$34.95** |
| **WRX911 Blue** | *Order #1011* | **$32.95** |

## KA008

The **Kaito KA008** is a self sufficient digital radio covering AM, FM and four SW bands: 4.0- 9.0, 9.0-14, 14-19 and 19-26.1 MHz. The KA008 has a built in hand generator and solar cell array for internally recharging 3 NiMH AA cells (not supplied). The KA008 may be operated from the supplied AC adapter. This radio has a built-in emergency LED lamp and clock-timer. Comes with: AC adapter, earbuds, wrist strap and soft wire antenna. Size: 6 1/2 x 5 1/2 x 2 1/4 inches. Ninety day limited mfg. warranty.

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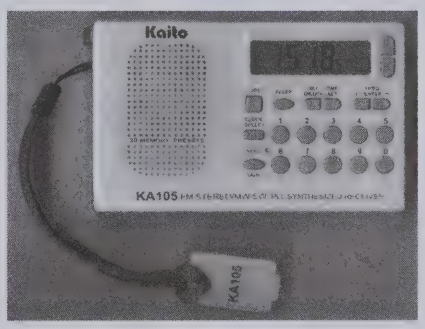
| **KA008** | *Order #4573* | **$39.95** |

## KA105



The **Kaito KA105** has a striking aluminum alloy front panel. This stylish portable tunes AM from 520-1710 kHz (10 kHz steps), shortwave from 5.95 to 15.60 MHz (5 kHz steps) and FM from 87.5 to 108 MHz. Tuning is easy with manual tuning, seek tuning, memory tuning and direct keypad entry. It features 30 memory presets. A dual 24 hour clock has alarm and sleep functions. Other controls include: stereo-mono switch, lock switch and LCD lamp switch. There is a jack for external power (3-5 VDC) or the radio operates from two AA cells (not supplied). There is a built-in ferrite antenna for AM and a telescopic whip for SW and FM. There is also an external antenna jack for SW. The KA105 comes with: AC adapter, cloth carry pouch, external wire antenna, wrist strap and stereo earbuds. Size: 4.25x2.9x0.9 inches (110x70x20mm). One year limited manufacturer's warranty.

| | | |
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| **KA105** | *Order #0105* | **$49.95** |

# ICOM IC-R75

The **ICOM IC-R75** provides full coverage from 30 kHz to 60 MHz; all longwave, medium wave and shortwave frequencies are supported plus extended coverage to include the 6 meter amateur band. Some innovative features of the R75 are: FM Mode Detection (*not* FM broadcast band), Twin Passband Tuning, Two Level Preamp, 99 Alphanumeric Memories, 2 Scan Edge Memories, Noise Blanker, Selectable AGC (FAST/SLOW/OFF), Clock-Timer, Squelch, Lock, Attenuator and backlit LCD display. Record output and record activation jacks are on the back panel. The R75 is an excellent single sideband receiver (SSB). The supplied 2.1 kHz SSB filter is suitable for utility, amateur, or broadcast SSB. However, two optional CW/SSB filter positions are also available (one per I.F.). Icom is currently shipping the **UT-106** factory-installed in the R75! Other interesting options are shown below. These options are illustrated on our website. For more information please request a color brochure, stop by our showroom or visit our website at: **www.universal-radio.com**

## SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 30 - 60000 kHz |
| Power | 12 VDC 1.1A<br>120VAC P.S. included |
| Antenna Impedance | 50 ohm & Terminals |
| Selectivity (-6dB) | AM 6.0 kHz<br>SSB/CW 2.1 kHz<br>FM 12.0 kHz |
| Sensitivity | <0.16 µV CW/SSB<br>(10 dB S/N) 1.8-30 MHz |
| Stability | 7 PPM 1 to 60 mins.<br>1 PPM after 60 mins. |
| Intermediate Freqs. | 1st IF = 69.0115 MHz<br>2nd IF = 9.0115 MHz<br>3rd IF = 455 kHz |
| Image Rejection | >70 dB (<30 MHz). |
| Memories | 99 Alpha and 2 bandedge |
| Audio Output | 2 Watts at 8 Ohms 10% |
| Circuit Type | Triple Conv. Superhet. |
| Antenna Connectors | SO239 and terminals |
| Dimensions | 9.5 x 3.7 x 9.1 inches<br>241 x 94 x 229 mm |
| Weight | 6.6 Lbs. net (3 kg) |

## OPTIONS

| | | | |
|---|---|---|---|
| ✦ CT-17 | **CI-V Level Converter for Remote Control from PC** | *#2771* | $129.95 |
| ✦ CR-282 | **High Stability Crystal Unit** (±0.5 PPM) | *#2137* | 129.95 |
| ✦ FL- 52A | **CW/RTTY Narrow 500 Hz Filter 455 kHz IF** | *#0903* | 179.95 |
| ✦ FL- 53A | **CW Narrow 250 Hz Filter 455 kHz IF** | *#0909* | 179.95 |
| ✦ FL- 96 | **SSB Wide 2.8 kHz Filter 455 kHz IF** | *#2387* | DISC |
| ✦ FL-222 | **SSB Narrow 1.8 kHz Filter 455 kHz IF** | *#0327* | 179.95 |
| ✦ FL-257 | **SSB Wide 3.3 kHz Filter 455 kHz IF** | *#3288* | 169.95 |
| ✦ FL-100 | **CW/RTTY Narrow 500 Hz Filter 9 MHz IF** | *#2968* | 99.95 |
| ✦ FL-101 | **CW Narrow 250 Hz Filter 9 MHz IF** | *#2999* | 99.95 |
| ✦ FL-103 | **SSB Wide 2.8 kHz Filter 9 MHz IF** | *#1433* | 94.95 |
| ✦ FL-223 | **SSB Narrow 1.9 kHz Filter 9 MHz IF** | *#2312* | 79.95 |
| ✦ FL-232 | **CW/RTTY Narrow 350 Hz Filter 9 MHz IF** | *#2712* | 89.95 |
| ✦ MB-5 | **Mobile Mounting Bracket** | *#1896* | 44.95 |
| ✦ MB-23 | **Carry Handle** | *#1088* | 12.95 |
| ✦ OPC-869 | **DC Fused Power Cord for 12 VDC operation** | *#2966* | 39.95 |
| ✦ RS-R75 | **Remote Control Windows® 95/98 Control Software & cable** | *#2514* | 59.95 |
| ✦ UT-102 | **Voice Synthesizer** (announces frequency, mode, signal & time) | *#3437* | 59.95 |
| ✦ UT-106 | **AF DSP Unit** (providing Auto Notch and Noise Reduction) | *#3097* | 139.95 |
| ✧ SWLRem | **Remote Control Interface** (non-Icom, see website for details) | *#4425* | 79.95 |

## PRICING

ICOM IC-R75 List Price ..... $732.00
**ICOM IC-R75 Discount Price**
*Order #0175* ..... **$589.95**

**Important Pricing Note:**
Please call our toll-free number 1 800 431-3939 or check our website for current Icom R75 pricing and special promotions.

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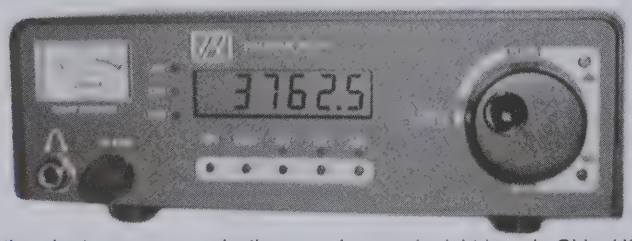
**CALL or visit our website to learn about the FREE bonus item included with your R75 order.**

# R30C R30CC



The **Palstar R30** is an innovative shortwave communications receiver made right here in Ohio, USA. Coverage is from 100 kHz to 30 MHz in AM, LSB, USB and CW modes. The six digit backlit display shows frequency to the 100 Hz. There are two tuning rates, slow and fast. In each tuning rate the step size varies with the speed of knob rotation. In the slow tuning rate the step size is 20 to 100 Hz. In the fast tuning rate, the step size is 100 to 500 Hz. The two bandwidths may be selected independent of mode. Other features include: analog S-meter, 10 dB RF attenuator, AGC fast/slow, tilt bar, tuning lock, internal speaker, mute line, backlight on-off, line output, 1/4 inch speaker output and 1/4 inch headphone jack. There is also a cell holder within the radio that holds ten AA alkaline cells (not supplied) for portable operation. This radio comes in two versions depending on desired filters. A very sensitive and quiet receiver. Only 8.25 x 2.5 x 8.8 inches. One year limited warranty. Optional SP30 external speaker with cable is order *#0543* $58.95

## SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 100 - 30000 kHz |
| Power | 12-15 VDC 600 ma<br>120VAC P.S. included |
| Antenna Impedance | 50 ohm SO239 or<br>single wire 500 ohm |
| Selectivity (-6dB) | 6.0 / 2.5 kHz **R30C**<br>5.8 / 2.5 kHz **R30CC** |
| Sensitivity | <0.5 µV SSB<br>(10 dB SN) 0.1-30 MHz |
| Stability | ± 30 Hz |
| Intermediate Freqs. | 1st=45 MHz, 2nd=455 kHz |
| Memories | 100 |
| Audio Output | 2 Watts at 8 Ohms 1% |
| Circuit Type | Double Conv. Superhet. |
| Dimensions | 8.3 x 2.6 x 7.7 inches<br>210 x 65 x 195mm |
| Weight | 2.2 Lbs. (1 kg) net |

### PALSTAR R30C
**Murata 6.0 kHz / Collins 2.5 kHz filters**
*Order #0530* ..... **$589.95**

### PALSTAR R30CC
**Collins 5.8 kHz / Collins 2.5 kHz filters**
*Order #0430* ..... **$659.95**

### PALSTAR SP30
External metal speaker with cable.
*Order #0543* ..... **$58.95**

## AR7030 PLUS

The **AOR AR7030+** is the latest result of a combined project between the AOR Company of Japan and a designer group in England. The AR7030+ represents the very latest and best design featuring exceptional strong signal handling and is bristling with enhanced features. The AR7030+ has been targeted to handle strong signals that are of prime concern to European listeners. It offers greater than +35dBm IP3 and 104dB dynamic range (SSB, 2.2kHz, 20/40kHz spacing). This coupled with excellent selectivity makes the AR7030 a strong choice for the shortwave broadcast listener or DXer. Although performance is excellent, features have not been forgotten. You get: Synchronous AM, Passband Tuning, four levels of attenuation, dual VFOs and 24 hour clock-timer. The 400 scannable memories store frequency, bandwidth, PBS, Squelch and BFO settings plus alpha tagging. The mini headphone jack will accept a mono or stereo 3.5mm plug. The two line 48 character backlit LCD gives you the status of the receiver. The AR7030+ comes with four standard bandwidths. There is a 2.2 kHz filter for SSB. There is a Murata CFK455J 4.0 kHz for AM DXing (stated as 3 kHz by the Murata and displays/sounds like 3.7 kHz in this radio). There is also a 5.5kHz AM filter and a 9.5 kHz filter for NFM. The supplied full-featured 32 button infrared remote provides access to virtually all facilities including: volume, tone, numeric keypad, memories, PBT, filter selection, etc. A remote RS-232 level port (5 pin 240° DIN) is also provided for computer control. Made in England. Includes 120 VAC adapter.

List Price $1799.95 *Order #3396* **$1499.95**

### SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 0 - 32000 kHz |
| Circuit Type | Dual Conv. Superhet. |
| IF | 45 MHz, 455 kHz |
| Selectivity (-6 dB) | 9.5, 5.5, 4, 2.2 kHz |
| Sensitivity | 0.3 µV SSB 10 dB S/N from .15-32 MHz |
| Stability | ±2.5 PPM |
| Dynamic Range | >100dB AM (7 kHz)<br>>105dB SSB (2.2 kHz)<br>>110dB CW (.5 kHz) |
| Audio Output | 2W 8 ohms |
| Antenna Impedance | 50 ohm or single wire |
| Power | 12-15 VDC 500 ma or with supplied AC PS |
| Dimensions | 9.4"W x 3.55"H x 10" D 238x93x277mm (2.2 kg) |
| Weight | 4.9 Lbs. (9 Lbs. ship) |

## OPTIONS

| AR7030 | AR7030+ | Order# | Price | Item |
|---|---|---|---|---|
| ✧ | ✧ | *1523* | 79.95 | **AOR CFJ455K8 Murata 1 kHz Filter** |
| ✧ | ✧ | *2371* | 59.95 | **AOR CFK455I Murata 4 kHz Filter** |
| ✧ | ✧ | *2146* | 59.95 | **AOR FL124 Daughter Board** |
| | ✦ | *2130* | 24.95 | **AOR IR-7030-02 Infrared Remote** (as supplied) |
| ✧ | ✧ | *0565* | 99.95 | **AOR MF300 Collins 300 Hz CW Filter** |
| ✧ | ✧ | *3852* | 99.95 | **AOR MF500 Collins 500 Hz CW Filter** |
| ✧ | ✧ | *2739* | 99.95 | **AOR MF4 Collins 4 kHz AM Filter** |
| ✧ | ✧ | *1215* | 99.95 | **AOR MF6 Collins 6 kHz AM Filter** |
| ✦ | ✦ | *0380* | 369.95 | **AOR LA380 Loop Aerial 0.01-500 MHz.** (Shown on page 33) |
| ✦ | ✦ | *0174* | 89.95 | **AOR SM7030 Service Kit** Includes PC diagnostic disk. |
| | ✦ | *0889* | 339.95 | **AOR UPNB7030 NB and Notch Upgrade for AR7030+** |
| ✦ | ✦ | *4474* | 99.95 | **ERGO Software CD** Windows 95/98/Me/2000/NT/XP. Not an AOR product. For info. visit: **http://swldx.com** |

**LEGEND**
✦ User installable
✧ Requires soldering or technical skill.

Visit our website to view all options!

## FDM77

The latest European technology is brought to the forefront by the cutting edge **ELAD FDM77**. This Italian-made, software defined shortwave receiver offers a host of advanced features coupled with exceptional performance. This multimode, continuous coverage receiver tunes 10 kHz to 60 MHz, employing a high dynamic range Front-end with seven band preselection and preamplifier.

The triple conversion superheterodyne features IFs at 70 MHz, 455 kHz and 12 kHz. There are 10 kHz and 4 kHz ceramic and crystal filters on the 70 MHz and 455 kHz IF. Variable bandwidth on down to 500 Hz is supported on the 12 kHz IF. Modes of reception include AM, FM, CW, LSB, USB and DRM. Yes, DSP demodulators for all traditional DRM modes are provided. Support for DRM was engineered in from the beginning.

The FDM77 system includes: the radio, ELAD Windows™ XP/2000 software CD, 120 VAC power supply, audio cable and USB 2.0 cable. Minimum and recommended PC requirements are: Pentium 700 MHz/Pentium 4 @ 1.2 GHz, 128/512 MB RAM, 50 MB HD, 16-bit SoundBlaster compatible soundcard (Line or Microphone) without AGC, USB 1.0/2.0 and VGA 1024 x 768 pixel with 65.536 (16 bit) colors.

List $720.00 *Order #0077* **$599.95**

## SDR-14

The **RFspace SDR-14** is a 14-bit software defined radio receiver, offering a broad range of spectrum analyzer and demodulation capabilities. The hardware samples the whole 0-30 MHz band using a sampling rate of 66.667 MHz. The digital data from the ADC is processed into I and Q format using a direct digital converter (DDC) and is then sent to the PC for processing using a USB 1.1 interface. All of the demod and spectral functions are done on the PC side. Supported formats include USB, LSB, AM, FM, WFM, CW, CWr and DSB. Filter bandwidths are continuously adjustable. DRM is now supported via special demod mode using third-party software (DReaM) by routing the demod audio through the mixer control. The SDR-14 supports high resolution spectral captures using up to 262144 point FFTs. The maximum spectral display width is 30 MHz simultaneously. One of the most exciting features of the SDR-14 is the ability to record band segments of any band to hard drive in realtime. This is done at a rate of 52GB/day for a 150 kHz wide segment. The stored file contains everything that happened in that segment of the band for the duration of the recording. The fidelity of the file is superb with over 96dB of dynamic range. The recording can be played back at any time with full tunability and choice of modes. The recording can also be analyzed for hidden signals and carriers. The SDR-14 comes with AC power supply, USB cable and computer CD. Please vist the Universal website to view screen shots, spectrograms and complete specficiations.

**SDR-14** *Order #0014* **$1099.95**

# JRC Japan Radio Co., Ltd. NRD-545 DSP

If you had the opportunity to look into the radio room of most ocean going commercial ships, chances are the radio equipment you would see would be made by the Japan Radio Company. This company founded in 1915, is clearly the leading manufacture of top quality professional radio communications equipment in the world. The **JRC NRD-545 DSP** is the latest receiver in this very long and very proud tradition. And the '545' may be the finest receiver they have ever offered to the hobby market. The substantial size, and ergonomic layout, make this receiver a pleasure to operate. Intuitive knob layout, a conventional keypad, and separate buttons means that this receiver is comfortable and straightforward to operate. You won't find a button on the NRD-545 with six different functions! The multicolored display, fashioned after the JST-245 transceiver series, is the clearest and most attractive in the industry.

Despite its outward good looks, the real power of this receiver is inside. The NRD-545 DSP is different from any receiver you have previously owned. Clear, distortion-free sound reproduction is possible through the magic of true digital signal processing at the IF level.

The receiving system employs a triple conversion circuit with IFs at 70.455 MHz, 455 kHz and 20.22 kHz. The NRD-545 uses a 40-bit extended floating point Digital Signal Processor with an 18-bit over-sampling system A/D converter and a 16-bit D/A converter. The DSP functions on 13 types of circuits after the IF, previously configured using analog circuits. DSP is used for all-mode detection including AM synchronous detection (ECSS). Incredible selectivity characteristics are achieved by the use of an Infinite Impulse, structure concurrent Chebyshev-type digital filter. In English this means, the NRD-545 gives you a continuously variable bandwidth from 10 Hz to 10 kHz in 10 Hz steps. You virtually have 990 different bandwidths, each with excellent adjacent channel rejection. DSP is also used to control Pass-Band Shift, another tool to reduce QRM. A 256 step DSP Noise reduction circuit and 256 step DSP Beat Canceller and DSP Auto-Track Notch are other new tools in your arsenal to dig out difficult DX signals. The DSP AGC works in all modes and is continuously variable from .04 to 5 seconds in SSB/CW/RTTY. 1000 Memories store: frequency, mode, bandwidth, ATT, AGC and step. Other refinements include: DSP Squelch, RS-232 port, ECSS, Dial Lock, Tone, RF Gain, Scan, Sweep, Mute, Dimmer, Clock-Timer, Adjustable Torque Dial, Attenuator, modular construction and two Noise Blankers. Even a basic Baudot RTTY demodulator, feeding the RS-232 port, is included. The NRD-545, was the *1999 World Radio TV Handbook* receiver award winner. (Please note that this radio does not receive the FM broadcast band).

## PRICING

NRD-545 DSP List Price ..... $1999.00
**NRD-545 DSP Discount Price**
*Order #1545* ..... **$1799.95**

## FREE BONUS OFFER

Call or visit our website to learn about the FREE bonus item included with your NRD-545.

## SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 100 - 30000 kHz |
| Power | 100/120/220/240 VAC<br>12-16 VDC 30W or less |
| Antenna Impedance | 50/600 ohm |
| Selectivity (-6dB) | WIDE 4.5 kHz<br>INTER 2.4 kHz<br>NARROW 1.0 kHz<br>FM-N 10.0 kHz<br>and variable from<br>0.01 to 9.99 kHz |
| Sensitivity | <.32µV SSB 1.6-30 MHz<br>(10 dB S+N/N) |
| Stability | ±10 ppm 5-60 mins.<br>±2 ppm >60 mins. |
| RS-232 Interface | 4800 baud (1/8/N/1) |
| Tuning Steps | 1, 10, 100 Hz, 1, 5, 6.25<br>9, 10, 12.5, 20, 25, 30<br>and 100 kHz. |
| IF Rejection | >70 dB |
| Image Rejection | >70 dB |
| Spurious Response | >60 dB |
| Notch Filter Atten. | >40 dB |
| Notch Var. Range | ±2.5 kHz |
| Notch Auto Tracking | ±10 kHz |
| PBS Range | ±2.3 kHz (50 Hz steps). |
| Dynamic Range | 106 dB (IF range 300 Hz) |
| Audio Output | 1 Watt at 4 Ohms |
| Circuit Type | Triple Conv. Superhet. |
| IFs | 70.455 MHz, 455 kHz,<br>and 20.22 kHz. |
| Temperature | 0° to 50°C (32° to 122°F) |
| Physical | 13x5.63"x12.9" 16.5 Lbs. |

## DSP FUNCTIONS

**● DSP All-Mode Detection**
DSP signal detection in all modes including LSB, USB, CW, RTTY, FM, AM and ECSS.

**● DSP IF Filter**
Superior selectivity is achieved by a simultaneous Chebyshev type digital IF filter with an infinite impulse response configuration. The pass bandwidth is continuously adjustable from 10 Hz to 9.9 kHz in 10 Hz steps (BWC).

**● DSP Pass-Band Shift (PBS)**
Radio interference is pushed out of the band by shift the center frequency of the digital IF filter upward or downward in the variable range of ±2.3 kHz (in 50 Hz steps).

**● DSP Noise Reduction (NR)**
Signal processing is adjustable in 256 steps, allowing the most audible conditions to be set. The NR function is effective for such noise that the noise blanker cannot handle.

**● DSP Beat Canceller (BC)**
Completely periodic signals such as beat sounds (hets) can be exalted and cancelled.

**● DSP Noise Blanker (NB)**
NB-1 (narrow blanking width) and NB-2 (wide blanking width) can be switched over and the NB detection level is adjustable.

**● DSP Notch Filter (NOTCH)**
Beat sounds are attenuated (>40dB) using the steep attenuation characteristic of the notch filter. Despite its steep characteristics, beat sounds are digitally processed and attenuated when the NOTCH is reset. It is adjustable within ±2.5 kHz (in 10 Hz steps). The Notch follows in the range of ±10 kHz even when the tuning dial is rotated.

**● DSP Automatic Gain Control (AGC)**
Digital AGC is applied to all modes (except WFM). The AGC is continuously adjustable between 0.04 and 5.1 seconds in 20 msec. steps in all modes except FM, AM and AMS.

**● DSP Beat Frequency Oscillator (BFO)**
The BFO generates signals in the LSB, USB, CW and RTTY modes.

**● DSP RF Gain (RF)**
The information transferred to the RF GAIN control via the A/D converter is entered into the DSP to adjust gain inside the DSP and the gain of the primary IF amplifier.

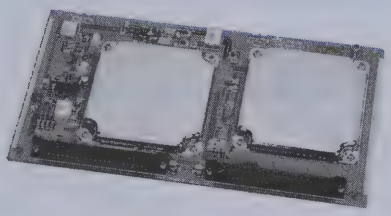
**● DSP Squelch (SQ)**
The Squelch function is available in all modes.

**● DSP Tone Control (TONE)**
The audio quality may be adjusted in all modes (except RTTY & WFM) in the range of 1 to 10 kHz.

**● DSP S-Meter**
The signal level is determined in reference to the input signal to the DSP and the level is converted into an antenna input level, which activates the S-meter.

JRC Japan Radio Co., Ltd.

## CHE-199



## NVA-319

### NRD-545 OPTIONS

| # | Item | Description | Price |
|---|---|---|---|
| *0852* | **NVA-319** | Speaker with Filters | $199.95 |
| *3727* | **CGD-197** | Hi-Stability TCXO ± 0.5 | 99.95 |
| *0851* | **6ZCJD00350** | PC Serial Cable | 59.95 |
| *0682* | **ST3** | Headphones (see pg. 31) | 69.95 |
| *4474* | **ERGO4** | Windows PC Program | 99.95 |
| *3728* | **CHE-199** | Internal VHF-UHF Converter extends receive to1849 MHz (less cellular) | 399.95 |

YAESU

## FRG-100B

The **Yaesu FRG-100B** receiver provides the performance of a quality communications receiver at an affordable price. Solid coverage from 50 kHz to 30 MHz in CW, SSB and AM modes (FM mode with optional *#0816*) is featured. The FRG-100B incorporates features that both casual and serious shortwave listeners will appreciate. Reception modes and most receiver functions are push-button selectable from the front panel. A crisp backlit LCD with adjustable brightness provides frequency readout and important operational status at a single glance. Selectable tuning steps of 10 Hz, 100 Hz and 1 kHz are standard, with other tuning steps programmable by the user. Fifty tunable memories store frequency, mode and filter information. Two additional memories provide band-edge information used for scanning. The FRG-100B has programmable 12/24 hour clocks and sleep timers to enable you to automatically switch the receiver on/off to record your favorite broadcasts. Multifunction scanning (memory, band, selectable group or priority) with carrier or time-delay is supported. A special broadcast band mode enables convenient selection of 16 pre-programmed international broadcast bands. The FRG-100B's adjustable SSB carrier offset permits you to custom tailor the receiver's audio response. CW enthusiasts will enjoy the reverse BFO offset and selectable CW sideband. Installation of the 250 or 500 Hz narrow filter further enhances CW reception and interference rejection. Other features include adjustable AGC, RF attenuator, noise blanker, all-mode squelch, and signal strength meter. The built-in Yaesu CAT system, along with the optional FIF-232C interface, allow PC control of the FRG-100B (requires software, not provided). *Order #2786* **$599.95**

### OPTIONS

- ✦ **Yaesu TCXO-4** Improves stability from <± 10 p.p.m. to <± 2 p.p.m. *#3176* ..... **99.95**
- ✦ **Yaesu YF-115C CW Filter** 500 Hz for CW and 170 Hz RTTY *#2194* ..... **169.95**
- ✦ **Yaesu YF-110CN CW Filter** 250 Hz for CW and 170 Hz RTTY *#3178* ..... **159.95**
- ✦ **Yaesu FIF-232C Interface** Facilitates RS232 connection to PC *#0322* ..... **99.95**
- ✦ **Yaesu FM-100** FM mode option (does not add FM broadcast band) *#0816* ..... **49.98**
- ✦ **SWL Remote** Infrared remote module unit connects to the CAT port *#0783* ..... **79.95**

TEN-TEC

## RX-320D

### SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 100 - 30000 kHz |
| Power | 11-13.5 VDC 1.2A |
| Antenna Impedance | 50 ohm |
| Selectivity | Select any 5 from 34 built in. |
| Sensitivity | <.3 µV CW/SSB<br>< .64 µV AM |
| Freq. Accuracy | <±100 Hz at 25°C. |
| Tuning Steps | 10/5/1/.1/.01 kHz. |
| Third Order Intercept | +10 dBm |
| Audio Output | 1 Watt at 4 Ohms |
| IF Output | 12 kHz |
| IF Rejection | >60 dB |
| Image Rejection | >60 dB |
| Dimensions | 6.25"W x 3"H x 6.5D" (159x76x165 mm) |
| Weight | 2.5 Lbs. (1.14 kg) |

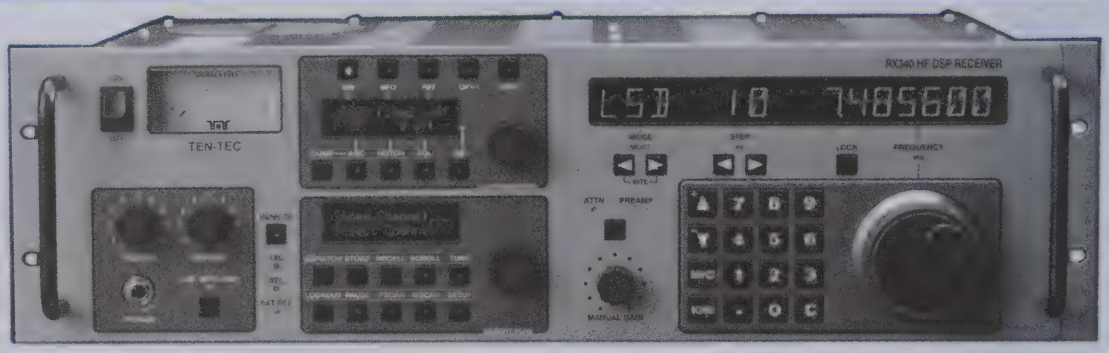
Computer based receivers have traditionally been about compromise, especially on shortwave. The Ten-Tec RX-320 broke that mold, providing exceptional HF performance. It employed true digital signal processing technology at the IF level to reduce the number of individual electronic components but yet provide features of far more expensive radios. The new **RX-320D** is capable of receiving DRM digital broadcasts with extra software (not supplied) and appropriate sound card. The Digital Radio Mondiale Consortium (DRM) was formed in 1998 when a group of pioneering broadcasters and manufacturers joined forces to create a universal, digital system for the AM broadcasting bands below 30 MHz. Since then, DRM has expanded into an international consortium of more than 70 broadcasters, manufacturers, network operators, research institutions, broadcasting unions and regulatory bodies. DRM is the world's only nonproprietary, digital system for shortwave, AM and LW providing near-FM quality sound. This new **D** model has a 12 kHz I-F output jack on the back panel that allows received signals to be streamed from the I-F directly to your computer's sound card for Digital Radio Mondiale decoding. Special DRM decoding software is required for listeing to DRM broadcast, and is available via sources on the Internet. It is not available through Ten-Tec or Universal Radio.

As with the original DX-320; you can enjoy selecting any five filters from 34 built into the radio (25 choices from 1050-8000 Hz and 9 from 300-900 Hz, all with 1.5:1 shape factor or better). A spectrum display function is also supported. Memories store frequency, mode, filter, BFO, name, comments, notes. A local-time, world-time (UTC) clock is continuously displayed. This stand-alone, black box PC radio only requires access to a serial port and one megabyte of free hard drive space for the software. It runs either Windows® 3.1 or Windows® 95/98. As with most Windows programs you can launch the PC radio, tune to an interesting station, and then put it in the background while your PC performs other tasks. You can even surf the web and tune the world at the same time. The line output can drive a computer sound card plus there is an external speaker jack (speaker not supplied). The RX-320D features a telescopic antenna or there is an RCA type antenna jack for an external antenna (recommended). This radio comes with and informative owner's manual written by noted author Joe Carr. This high-tech American-made product is a great value. We invite you to visit our website for more information on the RX-320D receiver plus Digital Radio Mondiale broadcasts and decoding.

**RX320D** *Order #0321* **$349.00**

TEN-TEC

## RX-340

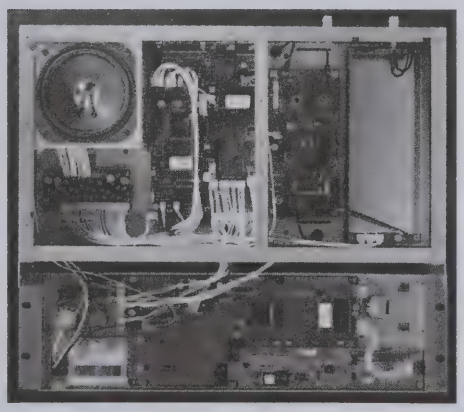



### SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 5 - 30000 kHz |
| Display Resolution | 1 Hz |
| Power | 97 - 264 VAC (47-440 Hz) |
| Consumption | 35W typical |
| Antenna Input | 50 ohm unbalanced BNC |
| Selectivity (-3dB) | 57 from 0.1 to 16 kHz |
| Sensitivity | <.14 µV .5-30 MHz CW<br><.25 µV .5-30 MHz SSB<br><.56 µV .5-30 MHz AM<br>(S+N/N -10dB,preamp on) |
| Frequency Stability | ± 1 p.p.m. |
| I.F. Rejection | 85 dB min (90 typical) |
| Image Rejection | 80 dB min (90 typical) |
| Ultimate Rejection | 70 dB min |
| 3rd Order Intercept | +30 dBm typical |
| 2rd Order Intercept | +75 dBm typical |
| AGC Attack/Hang/Decay | Mode dB/ms / sec / dB/sec<br>Fast: 0.8/0/1200<br>Med.: 0.8/0/100<br>Slow: 0.8/0/25<br>Prog. .01-1/.01-99.9/.01-99.9 |
| I.F. Output | 455 kHz, Post DSP |
| LO Phase Noise | -120 dBc/Hz 20 kHz typ. |
| Remote | RS-232 Multi-drop DB25.<br>75 - 38400 baud |
| Dimensions | 19.0"W x 5.25"H x 12.5"D |
| Weight | 12.5 Lbs. |

### BANDWIDTHS

| | | | | | | |
|---|---|---|---|---|---|---|
| 100 | 350 | 1000 | 1800 | 3200 | 5600 | 9600 |
| 120 | 400 | 1100 | 1900 | 3400 | 6000 | 10400 |
| 150 | 450 | 1200 | 2000 | 3600 | 6400 | 11200 |
| 170 | 500 | 1300 | 2200 | 3800 | 6800 | 12000 |
| 200 | 600 | 1400 | 2400 | 4000 | 7200 | 12800 |
| 220 | 700 | 1500 | 2600 | 4400 | 7600 | 13600 |
| 250 | 800 | 1600 | 2800 | 4800 | 8000 | 14400 |
| 300 | 900 | 1700 | 3000 | 5200 | 8800 | 15200 |
| (ISB fixed at 3.2 kHz, S-AM fixed at 6 kHz.) | | | | | | 16000 |



It has been said that there is no "perfect" shortwave receiver. But that was before the **Ten-Tec RX-340**. This communications receiver combines cutting-edge, state-of-the art technology, with excellent ergonomics and aesthetics. Digital signal processing (DSP) brings the performance and repeatability of expensive military grade communications receivers into the price range of top end commercial receivers for shortwave listeners. Tunable from 5 kHz to 30 MHz, it provides tuning steps and display resolution of 1 Hz. All three displays are blue-green vacuum fluorescent and provide unparalleled contrast and readability. The performance level of receivers in this class is possible only through extensive use of Digital Signal Processing. These designs utilize fewer analog circuits than traditional receivers. Powerful, specialized DSP microprocessors replace many of the discrete circuits with intensive software containing over 60,000 lines of code. High dynamic range analog stages provide first, second and third IFs (and 80 dB of AGC) where signals then hit analog to digital converters. Everything else is accomplished in DSP including all mode detection, IF filters, AGC (remaining 40 dB), adjustable BFO, passband tuning and noise blanker. An astounding 57 bandwidths from 100 Hz to 16 kHz are included. All filters have a shape factor of 1.5:1 or better (6 to 60 dB). USB, LSB, ISB, CW, AM, Synchronous AM and FM modes are built-in. Four AGC modes are provided. Users will be familiar with conventional Fast, Medium and Slow modes, but the "Programmable" mode is ground breaking. Users may build their own personal AGC characteristic by selecting attack, hang and decay rates. Manual control from the front panel is also adjustable over 120 dB range. A tunable Notch filter rejects unwanted signals in the passband. The receive front-end incorporates a built-in preselector with eight half octave bandpass filters. Switchable 10 dB preamp and 15 dB attenuator are also provided. The signal strength meter is calibrated in both S-units and dBm.

Little known to most shortwave listeners, TEN-TEC has been a supplier of commercial grade receivers for many years. Their RX-331 "black box" is used in military, diplomatic and commercial concerns worldwide. In this application multiple units run 24 hours per day, seven days per week without interruption. The RX-340 uses these field proven circuits along with a comprehensive front panel. This provides conventional manual operation while retaining all of the remote control aspects of the RX-331. A built-in multi-drop RS-232 interface permits remote operation at baud rates from 75 to 38400. Accessed from the rear panel DB-25 connector, the interface may be configured for single or multiple receiver applications. The complete command language is published in the receiver's manual so enterprising users can write their own remote control software. The RX-340 also includes Built-in Test or "BITE". This self-test capability will identify virtually all faults to the board level. Memory and Scan functions fall into four categories: a scratchpad memory, 100 memory channels, memory scan and sweep (F1 to F2 scan). Each memory channel retains the frequency, mode, IF bandwidth and BFO setting. The dwell time is programmable. Channel lockouts are provided and a Pause feature lets you interrupt scan momentarily. The Squelch works in all modes and adjusts over a 150 dB range.

The RX-340 features a built-in TCVCXO to provide ±1 ppm frequency stability across the entire operating range of 0 to 50 degrees C. Audio is delivered to a built-in speaker on the top panel, external speaker jack on the rear and the 1/4 inch headphone jack on the front. Separate volume controls are provided for the speaker and for the headphone. Fixed level 600 ohm audio is also provided on the rear panel. The front panel features a Lexan graphics overlay designed to last a lifetime. The chassis is aluminum with alodine plating on all parts to protect finish in less than ideal environments. The RX-340 mounts in a standard 19 inch rack. One year limited warranty. Made in Tennessee, U.S.A.

### I - O CONNECTORS

| | | |
|---|---|---|
| **Input** | Antenna | BNC |
| | External Reference | BNC |
| | Power | IEC 3-pin |
| **Output** | Signal Monitor | BNC |
| | I.F. | BNC |
| | First Mixer | BNC |
| | Second Mixer | BNC |
| | Audio/Aux | DB 15 female |
| | Headphone | 1/4" stereo |
| **Both** | RS-232 | DB 25 female |

### PRICING

**RX-340** HF Receiver
*Order #0340* ..... **$4250.00**

**307G** Matching Gray Speaker
*Order #4079* ..... **$98.95**

**ERGO** Software (not from Ten-Tec)
*Order #4474* ..... **$99.95**

For more info. visit: **www.universal-radio.com**

# ICOM R3

What a cool idea this is! The **ICOM R3** has wideband coverage from .5 to 2450 MHz (less 816-902 MHz) in AM, FM wide, FM narrow and TV. Yes, the R3 has a built-in 2 inch TFT color TV screen. You will be able to receive regular TV, but that is only the beginning. Imagine tuning to the UHF ham radio "fast scan" frequencies and seeing live ham transmissions. In fact with this coverage, you may be able to see all kinds of video links and wireless cameras, depending on your location! The display can also be used as a spectrum bandscope (up to 500 kHz) and to display the various operational menus. There is also a second mono LCD display that can be used for conventional frequency display purposes when battery life is a concern. The R3 is loaded with features. You get a huge 450 alphanumeric memory system (divided into 9 groups), 4-step attenuator, video and audio outputs, auto power off, a 4 position joy stick and BNC type antenna. A tone squelch system is built-in to provide quiet stand-by. The tone squelch includes two functions. The Pocket beep function alerts you with a beep when a specified station's signal is received. The tone scan function is used for the receiving signal such as for a repeater. This radio comes with BP-206 Lithium Ion battery, wall charger, belt clip and antenna. Prices shown are after manufacturer's discounts and valid at press time. Please call **1 800 431-3939** or visit our website to confirm current pricing

**Icom R3-26** *Order #3333* **$349.95**

The **R3-27 GOVT** model is the same as the **R3-26**, but *without* the cellular gaps. It can be purchased by govt. purchase order or for export only.

**Icom R3-27** *Order #3334* **$499.95**

### SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 500 kHz - 816 MHz<br>902 - 2400 MHz |
| Modes | AM, FM-N, FM-W, TV |
| Circuit Type | Triple Conversion<br>Quad above 1150 MHz. |
| Sensitivity | AM@10 DB S/N:<br>1.80µV .5-5 MHz<br>1.00µV 5-30 MHz<br>0.71µV 118-136 MHz<br>FM@10 DB SINAD:<br>0.32µV 30-600 MHz<br>0.56µV 600-1400 MHz<br>0.71µV 1400-2000 MHz<br>3.20µV 2000-2400 MHz |
| Selectivity | 12 kHz AM/FM-N,<br>150 kHz FM-W |
| Stability | ±6 ppm max. |
| Antenna Jack | BNC 50 ohm |
| Output Power | 105 mW 8 ohms 10% Dist. |
| Dimensions | 2.4 x 4.7 x 1.3 inches |
| Weight | 11 oz (290 g) |

### OPTIONS

| # | Item | Description | Price |
|---|---|---|---|
| *1240* | **BC135** | Desktop rapid charger | $59.95 |
| *3678* | **BP206** | Lithium Ion Battery | 46.95 |
| *0498* | **CP18A** | Cigarette ligher adapter | 22.95 |
| *4223* | **CSR3** | Win program software | 20.95 |
| *2453* | **LC-151** | Carry Case | 18.95 |
| *0918* | **OPC-474** | R3-R3 Clone Cable | 16.95 |
| *1180* | **OPC-478** | R3-PC Clone Ser. Cable | 34.95 |
| *0961* | **OPC-478U** | R3-PC Clone USB Cable | 44.95 |
| *0940* | **SP13** | Mono Earphone | 3.95 |

# ICOM R5-06

### OPTIONS

| # | Item | Description | Price |
|---|---|---|---|
| *3034* | **CSR5** | Win Clone Software CD | $32.95 |
| *0498* | **CP-18A** | Cigarette Lighter Cable | 22.95 |
| *1446* | **HP-4** | Mono Headphones | 22.95 |
| *0967* | **LC-146A** | Carry Case | 19.95 |
| *0918* | **OPC-474** | R5 to R5 Clone Ser.Cbl. | 16.95 |
| *1180* | **OPC-478** | R5 to PC Clone Ser.Cbl. | 34.95 |
| *0961* | **OPC-478U** | R5 to PC Clone USB C. | 44.95 |
| *0940* | **SP13** | Mono Earphone | 3.95 |
| *0531* | **SMA-BNC** | Converts BNC to SMA | 5.85 |

These accessories may all be viewed at:
**www.universal-radio.com**

It began with the R1 ... the first wideband receiver to fit in your pocket. The R2 offered further improvements and now we have the refined **ICOM R5**. Again at only 2.3"x3.4"x1.13" (58x86x27 mm) it is absolutely packed with features. And it is big on coverage, tuning from 150 kHz to 1309.995 MHz (less cellular and gaps) in these modes: AM, FM Narrow and FM Wide. The triple conversion circuit provides amazing sensitivity for the size. It has 1200 channels of memory storing: frequency, mode, step size, duplex direction and offset, CTCSS tone, tone squelch and skip settings. The R5 supports six types of scanning. Both automatic and manual Squelch are supported and CTCSS/DTCS decode is built in! Other features include: attenuator, LCD lamp, auto power off (30/60/90/120 mins.) and battery save. A built in ferrite bar antenna improves AM band (MW) performance. There are several power saving functions including backlit LCD timer. The R5 helps you stay out of Mother Nature's way with the Weather Radio alert function. When the National Weather Service issues a severe weather bulletin over the selected weather channel, the R5 emits an audio alert, then stays on that channel for the relay of pertinent information. Operation of the R5 is possible from a wide variety of power sources and the external DC jack also provides a power source and acts as a charger for AA NiCad-type batteries. The R5 comes with: BC149A wall charger, two NiCd AA cells, flexible SMA antenna, belt clip, wrist strap and Owner's Manual.

List $240.00 *Order #0005* **$199.95**

### SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 150 kHz - 824 MHz<br>849 - 869 MHz<br>894 - 1309 MHz |
| Modes | AM, FM-N, FM-W |
| Frequency Step | 5, 6.25, 9, 10,12.5, 15, 20, 25, 30, 50 or 100 kHz |
| Sensitivity | AM 1.3 µV .5-5 MHz[1]<br>AM .71 µV 5-30 MHz[1]<br>AM .56 µV 118-136 MHz[1]<br>FM-N .20µV 30-118 MHz[2]<br>FM-N .18µV 118-175 MHz[2]<br>FM-N .22µV 175-330 MHz[2]<br>FM-N .25µV 330-430 MHz[2]<br>FM-N .22µV 430-450 MHz[2]<br>FM-N .25µV 450-470 MHz[2]<br>FM-W .71µV 76-108 MHz[2]<br>FM-W .71µV 175-222 MHz[2]<br>FM-W 1.0µV 470-770 MHz[2] |
| Selectivity | AM, FM-N 15 kHz -6 dB<br>FM-W >150 -8 dB |
| Antenna Jack | SMA |
| Output Power | 100 mW 8 ohms 10% Dist. |
| Dimensions | 2.3x3.4x1.1" 58x86x23mm |
| Weight | 6oz (185 g) |

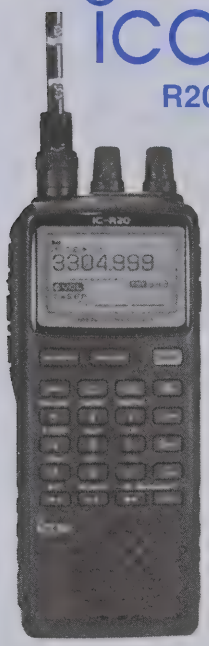
[1](10 dB S/N) [2](12 dB SINAD)

The **R5-11 GOVT** model is the same as the R5-06, but *without* the cellular gaps. The **R5-11 GOVT** can be purchased via government or qualifying commercial purchase order or for export only.

List $240.00 *Order #1935* **$204.95**

ICOM

## R20




The **R20-11 GOVT** model is the same as the R20-06, but *without* the cellular gaps. The **R20-11 GOVT** can be purchased via government or qualifying commercial purchase order or for export only.

*Order #1442* **$529.95**

Tune in the world where ever you go. The **ICOM R20-06** has extremely wide coverage from 150 kHz to 3304.999 MHz (less 824-849 & 869-894 MHz cellular). Modes of reception include: FM, WFM, AM, USB, LSB, CW. This radio has two VFOs with dual watch capability. A built-in 32 MB IC audio recorder can record 1, 2 or 4 hours of reception (playback quality will be less on 2 or 4 hour settings). A total of 1250 memories are featured: 1000 regular, 25 scan edge and 200 auto-write scan. And this is Icom's fastest scanning radio at 100 channels per second in VFO mode. Enjoy three types of priority watch: Memory Channel Watch, Memory Scan Watch and VFO Scan Watch. CTCSS/DTCS/DTMF decode is built-in. The large two line dot-matrix LCD can be programmed for 8 character channel names. You can "see" your signals with the built-in band scope. The sweep range can be set from ±14 kHz to ±1400 kHz. Other advanced features include: Voice Scan Control (opens squelch only when a modulated signal is detected), Auto Squelch, Attenuator, key lock, RF Gain, Noise Blanker, ANL and AF filter. A built-in ferrite bar antenna improves medium wave reception. Weather channels and weather alert (USA version only) are featured. CI-V PC control compatibility is supported with optional CT-17. PC programming is available via the optional CS-R20 software CD (with USB cable). The special "Set Mode Menu" allows you to tailor many operational parameters to your personal taste including: Priority Watch, Key-touch beep, beep level, power save, NB/ANL/AF filter functions, AM antenna selection, scope audio, dial speed, etc. Your R20 is preprogrammed with TV and popular shortwave channels. The R20 comes with: BC149A wall charger, BP206 Li-ion battery pack, MB-98 belt clip, battery spacer, BNC telescopic antenna and wrist strap. Please call or visit our website for further technical information and up-to-date pricing information.

List $620.00 *Order #0020* **$499.95**

### SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 150 kHz - 824 MHz<br>849 - 869 MHz<br>894 - 3304.9 MHz |
| Modes | AM, FM-N, FM-W, CW, LSB and USB |
| Frequency Step | .1, .5, 1, 5, 6.25, 8.33, 9, 10,12.5, 15, 20, 25, 30, 50 , 100, 200 kHz |
| Sensitivity | AM 1 µV 5-200 MHz[1]<br>CW .25 µV 5-200 MHz[1]<br>FM-N .32µV 5-200 MHz[2]<br>FM-W 1µV 75-200 MHz[2]<br>FM-W 2.2µV 200-340 MHz[2] |
| Selectivity | AM, FM-N 12 kHz -6 dB<br>FM-W >150 -6 dB<br>SSB, CW >3 kHz -6dB |
| Antenna Jack | BNC (50 ohms) |
| Output Power | 100 mW 8 ohms 10% Dist. |
| Dimensions | 2.3"W x 5.7"H x 1.2"D<br>58 W x 140 H x 31 D mm |
| Weight | 10 oz (300 g) |

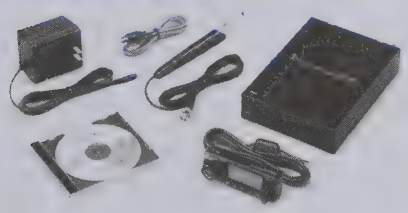
[1](10 dB S/N) [2](12 dB SINAD)

### OPTIONS

| # | Model | Item Description | Price |
|---|---|---|---|
| *1445* | **BC-156** | AC Rapid Charger | $59.95 |
| *3678* | **BP-206** | Li-ion Battery 3.7V | 46.95 |
| *0498* | **CP-18A** | Cigarette Plug & Filter | 22.95 |
| *1493* | **CS-R20** | Clone CD & USB Cable | 43.95 |
| *2771* | **CT-17** | Level Converter | 129.95 |
| *3517* | **MB-86** | Swivel Belt Clip | 7.95 |
| *1454* | **LC-158** | Carrying Case | 21.95 |
| *0940* | **SP-13** | Mono Earphone | 3.95 |

ICOM

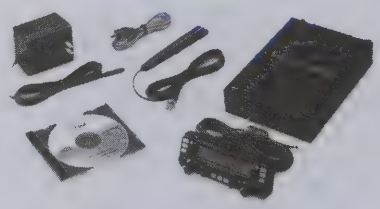
## R1500 PCR1500



The **Icom R1500-05** wideband computer receiver connects externally to your PC via a USB cable. The radio can also be controlled via the supplied control head (with not all functions supported). That is right; you can operate the R1500 strictly with the supplied control head. The USB port provides compatibility with many computer models, even laptops. Incredible coverage is yours with reception from 10 kHz to 3300 MHz (less cellular and minor gaps). See specifications on our website for exact coverage. Modes of reception include AM, FM-Wide, FM-Narrow, SSB and CW. (CW and SSB up to .5-1300 MHz only). Refinements include: CTCSS/DCS, pocket beep, IF shift, auto memory write, AFC, AGC, weather alert, 24 digit DTMF tone decoder and up to 2600 memory channels per file. The R1500 comes with a remote head, AD-113A AC adapter, whip antenna, USB cable and Windows 98SE/ME/2000/XP™ PCR1500 software CD.

List $848.00 *Order #1500* **$699.95**

## R2500 PCR2500



The **Icom R2500-05** wideband receiver uses a similar form-factor to the R1500, but has several enhancements, including two powerful features, previously only available in high end military receivers. These two features are dual watch and diversity reception. With dual watch, the radio can receive two signals simultaneously. With diversity reception, two antennas can be connected at the same time and employed to provide very stable reception. The optional UT-118 Digital Unit provides D-STAR® digital voice reception and the optional UT-121 supports APCO25 digital voice decoding. See the Universal website for details, options and screen shots. [R2500 shown above].

List $1196.00 *Order #2500* **$999.95**

The **Icom PCR2500-25** wideband computer receiver connects externally to your PC via a USB cable. It is similar to the R2500 shown above, but without the control head.

List $996.00 *Order #2501* **$849.95**

The **Icom PCR1500-25** wideband computer receiver connects externally to your PC via a USB cable. It is similar to the R1500 shown far left, but without the control head. Additionally it supports 1 Hz tuning.

List $696.00 *Order #1501* **$579.95**

### OPTIONS FOR ALL 4 MODELS

| # | Item | Description | Price |
|---|---|---|---|
| *3150* | **CP12L** | Cigarette ligher adapter | $27.95 |
| *1666* | **OPC-254L** | DC Power Cable | 12.95 |
| *3097* | **UT106** | AF DSP Unit | 139.95 |

### OPTIONS FOR R2500/PCR2500

| # | Item | Description | Price |
|---|---|---|---|
| *4367* | **UT108** | DTMF, Code Squelch | $26.95 |
| *3504* | **UT118** | D-STAR® Digital Unit | 189.95 |
| *4747* | **UT121** | APCO20 Decode Unit | 189.95 |

### OPTIONS FOR R1500/R2500

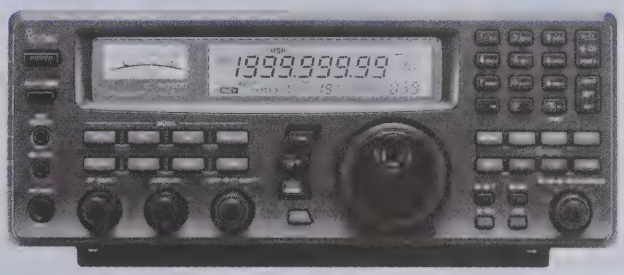
| # | Item | Description | Price |
|---|---|---|---|
| *2447* | **OPC-441** | Spkr.extension cable 16' | $24.95 |
| *4485* | **OPC-1156** | Panel extension cable 11' | 21.95 |

### GOVT/EXPORT MODELS

The models below are the same, but *without* the frequency gaps and can be purchased via government or cellular provider qualifying purchase order or for export only.

| Order | Model | List Price | Price |
|---|---|---|---|
| *#1131* | **Icom R1500-10** | $848.00 | $709.95 |
| *#1153* | **Icom PCR1500-30** | 696.00 | 589.95 |
| *#3518* | **Icom R2500-10** | 1196.00 | 999.95 |
| *#2992* | **Icom PCR2500-10** | 996.00 | 849.95 |

# ICOM R8500-04



## SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 100 kHz - 1999.99 MHz |
| Power | 13.8 VDC 2A or 110 VAC |
| Antenna Impedance | 50 ohm unbalanced |
| Selectivity (-6dB) | FM-N 5.5 kHz |
| | FM/AM 12 kHz |
| | FM-W 150 kHz |
| | SSB/CW 2.2 kHz |
| Sensitivity | 0.2 µV 2-30 MHz |
| | 0.32 µV 30-999.9 MHz |
| | 0.32 µV 1240-1300 MHz |
| | SSB (10 dB S/N) |
| Spurious Rejection | >60 dB 1.5-30 MHz |
| | >50 dB 30-1000 MHz |
| IF Shift Range | ±1.2 kHz |
| Dynamic Range | 107 dB |
| Frequency Stability | ±100 Hz <30 MHz |
| | ±3 PPM >30 MHz |
| Circuit Type. | Triple Conversion except Dual Conversion on WFM |
| Audio Output | 2 Watts 4 - 8 Ohms. |
| Dimensions | 11.3" x 4.4" x 12.16" (287x111x308 mm) |
| Weight | 17.7 Lbs. (22 Lbs. ship) |

The **Icom R8500-04 GOVT** model is full coverage (without the usual 824-849 / 869-894 MHz cellular gap) and can be purchased via government or qualifying commercial purchase order or for export *only*.

The **Icom R8500-04** produces performance, coverage and sophistication rarely seen outside the military commercial market. Covering 100 kHz to 1999.99 MHz, this receiver does cover it all; and more importantly; it does it *well* throughout this extraordinary range. Most wideband receivers tend to perform only modestly below 30 MHz. The R8500 (and R9000) are clear exceptions to this rule. Reception modes include AM, LSB, USB, CW, FM-N and FM-W. This receiver is equipped with IF Shift and Auto Peak Filter functions ... a first for receivers in this class. The IF shift effectively rejects nearby signals in the SSB modes. The APF can select between two bandwidths and serves as a tone control in the FM mode and can also selectively boost signals in the CW mode. Triple conversion and advanced RF circuits achieve an improved dynamic range of 107 dB and an intercept point of 27.5 dBm. Separate band pass filters minimize cross modulation and provide high sensitivity in the .1 to 30 MHz range. The R8500 employs a newly designed PLL circuit which provides tuning and readout resolution to an amazing 10 Hz. A host of tuning steps are featured: 10, 50, 100 Hz, 1, 2.5, 5, 9, 10, 12.5, 20, 25, 100 kHz and 1 MHz. In addition you can program your own tuning step (.5-199.5 kHz). And what a memory system! 1000 channels are available, organized in 20 banks of 40 channels, plus 100 skip channels and 100 Auto Write Memories. Other refinements include: Noise Blanker, S and Center Tune Meter, RF Attenuator, LCD Dimmer, Clock-Timer, Record Jack and Recorder Activation Jack, Selectable AGC, Main Dial Tension adjustment and three separate antenna connectors (covering two ranges: .1-30 and 30-2000 MHz). Supplied with AC adapter or may be run from 12 VDC. We are proud to offer this exceptional receiver. This receiver is available to government or export customers only.

### OPTIONS

| # | Item | Description | Price |
|---|---|---|---|
| *0828* | **AH7000** | Omni Antenna (pg. 50) | $169.95 |
| *1479* | **CR293** | High Stability(±0.5 ppm) | 279.95 |
| *0903* | **FL-52A** | CW Filter 500 Hz | 169.95 |
| *1088* | **MB-23** | Carry Handle | 12.95 |
| *3765* | **RS-R8500** | Win software & cable | 67.95 |
| *1696* | **SP23** | External Speaker | 169.95 |
| *3437* | **UT102** | Voice Synthesizer | 59.95 |

### PRICING

R8500-0 List Price ..... $2048.00
**R8500-04 Discount Price**
*Order #0663* ..... **$1699.95**

# ICOM PCR1000-04

### OPTIONS

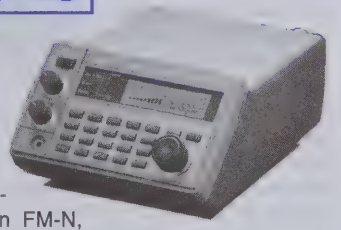
| # | Item | Description | Price |
|---|---|---|---|
| *0828* | **AH7000** | Omni Antenna (pg 50) | $169.95 |
| *0571* | **CP12** | Cigarette lighter plug | 27.95 |
| *3097* | **UT106** | DSP Notch/NR Unit | 139.95 |
| *2122* | **UG255** | SO239 to BNC | 5.89 |
| *4571* | **UG255** | N female to BNC | 4.95 |

The special order **Icom PCR1000-04** can be purchased for government or for export *only*. Visit our website for further details.

PCR1000-04 List Price ..... $612.00
**PCR1000-04 Discount Price**
*Order #2201* ..... **$569.95**

The **Icom PCR1000-04** wideband computer receiver connects externally to your PC. This provides compatibility with many computer models, even laptops. Incredible coverage is yours with reception from 10 kHz to 1300 MHz. Modes of reception (and bandwidth) include AM (15/6 kHz), W-FM (230 kHz), N-FM (15/6), SSB (2.8 kHz) and CW (2.8 kHz). A triple conversion circuit ensures good performance over the entire range. Shortwave sensitivity (1.8-28 MHz) is 0.28µV. You can choose from three interface screens: Communications Receiver Screen, Component Receiver Screen or Radio Screen. Other refinements include: Unlimited Memories, Band Scope, IF Shift, NB, AFC, Voice Scan Control, CTCSS decode, six scan types and on-line help. A built-in speaker is provided. Jacks include: BNC antenna, mini stereo audio out, DB-9F RS-232C and mini Packet. System requirements: PC with 486DX4, Pentium 100 or higher CPU, Windows 3.1/95, 16 Mb RAM, 3.5" FD, 10 Mb HD space and VGA or SVGA display. This latest version also includes the Bonito software CD with extra capabilities and the abiity to run on later versions of Windows. The PCR1000 comes with the BC123A AC adapter, but can also be powered from 12 VDC at 0.7 Amps with optional CP12. An RS-232C cable, and telescopic antenna are also included. The Icom software comes on two 3½" diskettes. Only 5 x 7.9 x 1.2 inches (127x200x30 mm) 2.3 Lbs.

# AOR AR3000AU



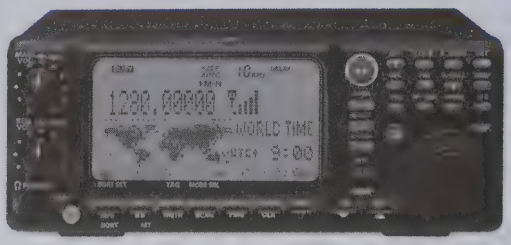
The **AOR AR3000AU** offers high performance and wide coverage: 100 kHz - 2036 MHz in FM-N, FM-W, USB, LSB, CW and AM. 400 memory channels are provided in four banks of 100 channels each. Each memory channel can store: mode, frequency, RF attenuator setting and lockout status. The first channel of each bank may also be used as a priority channel. The scan rate is 50 channels per second and search rate of 50 steps per second. The tuning rate can be as fine as 50 Hz for SSB/CW. The front panel is angled for optimum LCD viewing and keypad entry. Other features include: signal strength indicator, clock with sleep timer, tuning knob, keypad entry, record jack, attenuator and RS-232 port. The rear panel antenna input is a 50 ohm BNC. The AR3000AU runs from 13.8 VDC (0.5 A) or with supplied 110 VAC wall adapter. A very compact 5.5 x 3 x 7.75 inches 2.6 Lbs.

The special order AR3000AU can be purchased via government or qualifying commercial purchase order or for export only.

**AR3000AU** *Order #1079* **$1179.95**

YAESU

## VR-5000



The **Yaesu VR-5000** provides sophisticated wideband reception. Coverage is from 100 kHz to 2600 MHz (2.6 GHz) less cellular, in AM, FM-N, FM-W, LSB, USB and CW. This radio features a real-time bandscope and you get 2000 alphanumeric memories grouped into 100 banks. Optional aids such as a DSP unit, voice synthesizer and digital voice recorder are available. Jacks on the back panel include: Mute, 13.8 VDC input, External Speaker, 10.7 MHz IF Output, Antenna Input A (SO-239 50 ohm) & B (Hi Z 450 ohm), CAT Interface Jack (4800/9600/57600 bps). The VR-5000 comes with the PA28B 117 VAC adapter and a DC power cord. This radio is only 7.1x2.75x8 inches 4.2 Lbs (180x70x203 mm 1.9 kg). Please visit our website for full specs, color photos and current price.

### SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 100 kHz - 824 MHz<br>849-869 MHz<br>894-2600 MHz |
| Modes | AM, AM-N, AM-W, FM-N, |
| Memories | 2000 plus 5 Preset |
| SSB Freq. Step | 20/100/500 Hz/1/5 kHz |
| Sensitivity | AM 1.1 µV 4-30 MHz[1]<br>CW .3 µV 4-30 MHz[1]<br>FM-N .45 µV 30-2000 MHz[2]<br>FM-W 1.5 µV 30-2000 MHz[2]<br>[1](10 dB S/N) [2](12 dB SINAD) |
| Antenna Jacks | SO 239 50 ohm<br>Terminals 450 ohms unbal. |
| Speaker Jack | Mono Mini (3.5 mm) |
| Supply Voltage | 13.8 VDC 0.7 Amps |
| Operating Temp. | -10°C to + 50°C |
| Audio Output | 1 Watt 8 ohms |
| Dimensions | 7.1x2.75x8 inches 4.2 Lbs<br>180x70x203 mm 1.9 kg |

### ACCESSORIES

| | | | |
|---|---|---|---|
| *#3545* | **DSP-1** | DSP Notch/NR/Bandp. | **$119.95** |
| *#0560* | **DVS-4** | Digital Voice Recorder | **44.95** |
| *#2006* | **FVS-1A** | Voice Synthesizer | Discontinued |

### PRICING

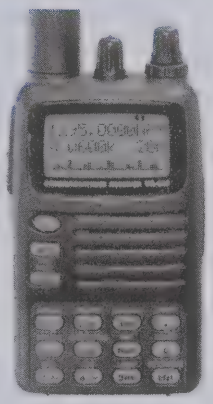
VR-5000 List Price ..... $754.08

**VR-5000 Discount Price**

*Order #0050* ..... **Please Call**

YAESU

## VR-500



The **Yaesu VR-500** is the first to provide wideband coverage plus single sideband capability in such a small and capable package. Coverage is solid from 100 kHz to 1300 MHz (1.3 GHz) less cellular, in AM, FM-N, FM-W, LSB, USB and CW. You get 1000 regular memories (10x100) plus tuning steps from 50 Hz to 100 kHz. Other features include: backlit keypad, priority, power-off timers, adjustable battery saver, 60 channel bandscope, attenuator, dual watch, alphanumeric recall, bank scanning Smart Search™. The VR-500 operates from two AA cells. Includes BNC antenna, hand strap and belt clip. Only 2.3x3.7x1" 8 oz. (58x95x25mm 220 g).

List $399.00 *Order #0500* **Please Call**

### SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 100 kHz - 824 MHz<br>849-869 MHz<br>894-1300 MHz |
| Modes | AM, FM-N, FM-W,<br>CW, LSB and USB |
| Frequency Step | .05, .1, 1, 5, 6.25, 9,<br>10,12.5, 15, 20, 25, 30,<br>50 or 100 kHz. |
| Sensitivity | AM 1 µV 5-160 MHz[1]<br>CW .5 µV 5-160 MHz[1]<br>FM-N .5 µV 5-160 MHz[2]<br>FM-W 1.5 µV 5-370 MHz[2]<br>FM-W 1.8µV 370-520 MHz[2]<br>[1](10 dB S/N) [2](12 dB SINAD) |
| Antenna Jack | BNC 50 ohm |
| Speaker Jack | Mono Mini (3.56 mm) |
| External Voltage | 9 - 13.8 VDC |
| Audio Output | 90/125 mW 8 ohms |
| Dimensions | 2.3"W x 3.7"H x 0.9"D 8 oz<br>58 x 95 x 24 mm 200g |

### OPTIONS

| | | | |
|---|---|---|---|
| *#4037* | **ADMS3** | Win Software & PC cable | **$37.95** |
| *#4035* | **CSC72** | Carry Case | **19.95** |
| *#1693* | **EDC5B** | DC Cable +Cigar Plug | **23.95** |
| *#3116* | **EDC6** | DC Cable | **6.95** |
| *#4036* | **FNB59** | NiCad Batt 2.4V | Discontinued |
| *#0594* | **NC60B** | AC Adapter | **13.95** |

YAESU

## VR-120D

The **VR-120D** is a compact wideband receiver covering 100 kHz to 1299.995 MHz (less cellular and image gaps), in AM, FM-N and FM-W with 640 alphanumeric memories. Scan features include: Full Mem. Scan, Mem. Bank Scan, Selected Mem. Channel Scan, Band-Limit Mem. Scan, Smart Search, Priority Channel Watch and Dual Watch. Manual tuning is via the tuning knob. A built-in AM ferrite loop insures good AM performance. A Channel Counter feature measures the frequency of a strong nearby signal. With BNC antenna, wrist strap and belt clip. 2.3 x 3.8 x 1 inches 8 oz. Requires two AA cells (not supplied). Optional FNB79 NiCad battery is available which will then require NC82/PA30B/CA34 (see below).

List $249.00 *Order #3120* **$199.95**

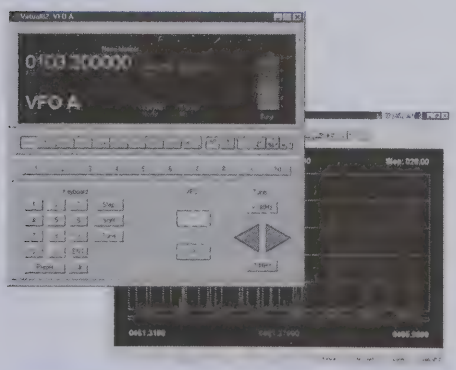
### SPECIFICATIONS

| | |
|---|---|
| Frequency Range | 100 kHz -1300 MHz<br>Less cellular and image gaps. See our website for list. |
| Modes | AM, FM-N, FM-W |
| Memories | 640 (ten banks of 64) |
| Frequency Step | 5, 6.25, 9,10,12.5, 15, 20, 25, 30, 50 and100 kHz. |
| Audio Output | 80 mW 8 ohms |
| Antenna Jack | BNC 50 ohm |
| Ext. DC Voltage | 5.5-10 VDC |
| Dimensions | 2.3x3.4x1" (58x85x26mm) |

### OPTIONS

| | | | |
|---|---|---|---|
| *#0384* | **CA34** | Charging sleeve | **$3.95** |
| *#4332* | **CSC76** | Carry Case | **19.95** |
| *#3646* | **EDC15** | Cigarette lighter cord | **36.95** |
| *#0353* | **FNB79** | Ni-Cad 2.4V 700 mAH | **9.95** |
| *#0269* | **NC82** | Charging Tray | **7.95** |
| *#1139* | **PA30B** | AC Adapter | **6.95** |

## BUTEL SOFTWARE



The sophisticated Butel Software supports memory/search banks and auto-mode bandplan. Includes a professional spectrum analyser application and other useful tools. Requires: Windows 95/98/ME/XP/2000, 2MB Video, 15 MB HDspace, CD Drive, COM Port 1 or 2 [USB not supported]. Visit our website for full details.

| # | Item | For Radio | Price |
|---|---|---|---|
| *2721* | **ARC 3** | ICOM R3 | **$39.95** |
| *2911* | **ARC 8** | Bearcat BCT8 | **39.95** |
| *1256* | **ARC 250BA** | Bearcat BC250/796 | **39.95** |
| *2288* | **ARC 396BA** | Bearcat BC396 | **39.95** |
| *1386* | **ARC 898** | Bearcat BC898 | **39.95** |
| *2725* | **ARC 5000** | AOR AR5000 | **99.95** |
| *0128* | **ARC 8200** | AOR AR8200 | **69.95** |
| *2738* | **ARC 8600** | AOR AR8600 | **69.95** |

## ALINCO DJ-X3T

The **Alinco DJ-X3T** wideband receiver covers 100 kHz to 1299.995 MHz (less cellular) in AM, FM wide and FM narrow modes. The illuminated display is large and easy to read. In addition to frequency information, it will also show the operating mode, memory channel, battery strength, signal strength and a number of other user-selected operating parameters. The DJ-X3T can also clone to other DJ-X3 units through a wired connection (cable not provided). The DJ-X3T features 700 memory channels in ten banks of 70 channels each. This radio may be operated with the EBP52S Ni-MH battery (optional) or with three AA cells (optional). FM stereo is available via the earphone jack. The operator has four selectable antenna choices: an internal AM bar antenna, a shortwave bar antenna, the earphone cable may be used as antenna or the SMA whip antenna terminal may be activated. This radio features an attenuator and also has a bug detector function. The DJ-X3T has three operating profiles: VFO, Preset, AM/FM/TV Frequencies and Memory mode. The user can make manual selections or scan in any of those modes. In the memory scanmode, the operator can choose one specified bank, certain banks can be linked for scanning or one can choose to scan all banks. There are 20 program and memory scan options. The configuration distributed by Alinco in the USA does not include the NiMH battery or charger, but these items are available optionally as listed below. The DJ-X3T includes: the radio, removable SMA antenna, wrist strap, belt clip and three AA cell holder [EDH-31S]. One year limited manufacturer's warranty.

List $302.95 *Order #1003* **$169.95**

### OPTIONS

| | | | |
|---|---|---|---|
| *#2669* | **EBP52NS** | NiMH 3.6V 500ma | **$34.95** |
| *#1133* | **EDC93** | Wall PS for EDC105 | **10.95** |
| *#1579* | **EDC105** | Charger for EBP52NS | **21.95** |
| *#1561* | **EBC18** | Belt Clip | **4.95** |

**For more information or to view options visit: www.RFfun.com**

## ALINCO DJ-X2000T

The **Alinco DJ-X2000T** provides sophisticated wideband coverage on the go! It tunes 100 kHz to 2150 MHz (less cellular) in LSB, USB, CW, AM, NFM and WFM. 2000 Alpha memories are organized in 40 banks of 50 channels each. A triple conversion circuit is employed and ±10 PPM stability is provided. The Instant Search features locks onto the nearest, strongest signal. The Channel Scope™ feature displays signals within a 40 channel or 7 channel range at one time. This function shows spectrum occupancy at a glance. The frequency counter uses a digital TCXO, accurate to ±1 PPM. You can record up to 160 seconds of audio in digital memory. Enjoy FM stereo to the headphone jack (headphones not provided). CTCSS decoder/tone scan is built-in. Your even get a 24 hour timer. The DJ-X2000T is PC programmable with a free download from the Alinco website (optional ERW4 and 2.5S-3.5S required).

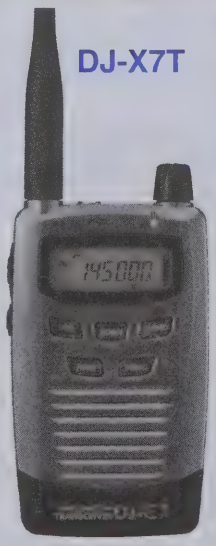
### OPTIONS

| # | Item | Description | Price |
|---|---|---|---|
| *1084* | **EBP-33N** | NiCad 4V 650 ma | **$31.95** |
| *2060* | **EBP-35N** | NiCad 7V 1900ma | **74.95** |
| *2983* | **EBP-36N** | NiCad 9V 650ma | **56.95** |
| *3166* | **EBP-37N** | NiCad 4V 700ma | **28.95** |
| *3664* | **EDC-36** | Cigar Filter Cord | **19.95** |
| *0708* | **EDC-37** | DC Power cable | **6.95** |
| *0590* | **EDH-16** | Battery Case 4xAA | **9.95** |
| *1477* | **ERW4** | PC Interface Cable | **34.95** |
| *0000* | **ESC-28** | Carry Case (EBP33N) | DISC |
| *0252* | **ESC-29** | Carry Case (EBP37N) | **9.95** |
| *2107* | **ESC-30** | Carry Case (EBP34N) | **9.95** |
| *4526* | **2.5S-3.5S** | 2.5mm-3.5mm Adapter | **2.69** |

The DJ-X2000T comes with EBP-37N 4.8V 700mAh NiCd battery, EDC-88 drop-in quick charger, metal belt clip, handstrap and BNC flex antenna. 2.25 x 5.6 x 1.2 inches (57x150x30mm). Please visit the Wideband section of our online catalog for specifications: **www.RFfun.com**

List $769.95 *Order #2020* **$499.95**

## ALINCO DJ-X7T



The **Alinco DJ-X7T** covers 100 kHz to 1299.995 MHz (less cellular) in AM, FM wide and FM narrow modes. The illuminated LCD display is easy to read and also shows the operating mode and memory channel. The DJ-X7T features 1000 memory channels and can clone to other DJ-X7 units with optional cable. This radio has four user-selectable antenna choices: an internal AM bar antenna, an internal SW bar antenna, the earphone cable may be used as antenna or the external, supplied SMA whip antenna terminal may be activated. Each DJ-X7T comes standard with: EDC-126 AC charger adapter, EBP-58N Lithium-ion battery, removable EA-131 SMA flexible antenna, antenna cap and EME-25 curl-cable earphone. 2.4 x 4 x 0.7 inches 3.7 oz.

List $199.95 *Order #3077* **$169.95**

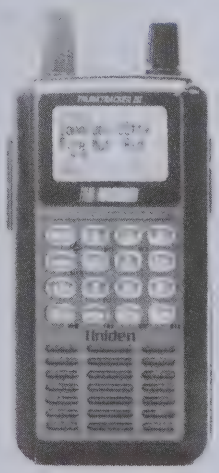
### OPTIONS

| # | Item | Description | Price |
|---|---|---|---|
| *2086* | **EBP-58N** | Li-Ion 3.7V 600 mAH | **$33.95** |
| *2216* | **EDC-32** | Cigar Filter Cord | **15.95** |
| *0590* | **EDH-16** | Battery Case 4xAA | **9.95** |
| *2259* | **ESC-38** | Carry Case | **13.95** |
| *1477* | **ERW4** | PC Interface Cable | **34.95** |
| *0531* | **SMA-BNC** | SMA to BNC Adapter | **5.85** |
| *4526* | **2.5S-3.5S** | 2.5mm-3.5mm Adapter | **2.69** |

**VIEW OPTIONS**
To view a photo of each Alinco option, please visit the Universal Radio website.

**GOVT. - EXPORT**
Contact Universal for information on Alinco radios for government or export applications.

## uniden Bearcat BR330T



The **Uniden BR330T** wideband receiver covers 100 kHz to 1299.995 MHz (less cellular) in AM, FM wide and FM narrow modes. That means traditional scanner coverage plus reception of AM, FM and shortwave! The BR330T is the first wideband portable radio to offer TrunkTracking III (Motorola, EDACS, LTR analog) technology. Uniden's exclusive dynamically allocated memory system allows the user to program its 2500 channel into any desired configuration. This allows for 50 or more systems to be programmed and scanned simultaneously. The Fire-Tone Out Operation allows the scanner to operate in a standby mode are respond when a fire tone-out or a two-tone sequential page is issued. The illuminated LCD display and keys are easy to read. You also get Quick Key Operation, Close Call™ RF Capture Technology, SAME Weather Alert, 13 Preprogrammed Service Searches, 10 Programmed Search Ranges and CTCSS/DCS Rapid Decode. The BR330T comes with antenna, three internally rechargeable NiMH AA cells and charger.

List $429.00 *Order #0330* **$269.95**

**REMINDER**
The use of a scanner or wideband receiver in a vehicle is prohibited in some areas. Check with your local authorities.

### OPTIONS

| # | Item | Description | Price |
|---|---|---|---|
| *3264* | **ARC330BA** | Butel Basic Software | **$39.95** |
| *1253* | **ESC-38** | Carry Case | **29.95** |
| *4764* | **USB1** | PC Interface Cable | **29.95** |

## AR5000A+3B

The **AOR AR5000A+3B** offers exceptional spectrum coverage. Covering all the way from 10 kHz to 3 GHz (less cellular), this "DC to daylight" radio won't miss much! Modes of reception include: AM, FM-N, FM-W, LSB, USB and CW. Six bandwidths are supplied (3, 6, 15, 40, 110 and 220 kHz.) and a slot for a .5 kHz filter is available. The triple conversion circuit and varactor tuned front-end provide excellent overload characteristics. Two thousand memories in 20 banks of 100 are featured. Other features include: two antenna inputs, antenna attenuator, keypad entry, computer control, squelch, S-meter and scanning. May be run from 12 VDC (1 Amp) or via supplied AC adapter. This "plus 3" version adds a Noise Blanker, AFC, more memories and AM Synchronous Detection. Visit our website or request a color brochure.

| Order | Model | Frequency Coverage | Extra Features | List Price | Your Price |
|---|---|---|---|---|---|
| *#0398* | **AR5000AB** | 10 kHz to 3 GHz (less cellular) | | $3179.00 | **$2449.95** |
| *#0408* | **AR5000AU** | 10 kHz to 3 GHz ***Restricted*** | | 3179.00 | **2499.95** |
| *#3705* | **AR5000A+3B** | 10 kHz to 3 GHz (less cellular) | +3 NB/AFC/Sync. | 3399.00 | **2499.95** |
| *#3706* | **AR5000A+3U** | 10 kHz to 3 GHz ***Restricted*** | +3 NB/AFC/Sync. | 3399.00 | **2599.95** |
| *#2539* | **AR5000AC** | 10 kHz to 3 GHz ***Restricted*** | Coherent | 3359.00 | **2899.95** |

The restricted models: **AR5000AU, AR5000A+3U** and **AR5000AC** are available for government or export only. Universal Radio does accept government purchase orders. Please call and ask for govt. sales.

### SPECIFICATIONS

Frequency Range .... 10 kHz - 3000 MHz[1]
Modes Received ..... AM [1]cellular blocked
FM-Narrow, FM-Wide
LSB/USB/CW
Intermediate Freq. ... 1st 622.2 MHz
2nd 10.7 MHz
3rd 455 kHz
Sensitivity ..... AM 10dB S/N:
.6 µV 1.5 -30 MHz
FM 12dB SINAD
.3 -.2µV 40-2600 MHz
Freq. Stability ..... ±1 PPM (0°-50°C)
Selectivity ..... 3, 6, 15, 40, 110, 220 kHz
Frequency Steps ..... 1 Hz to 999.999 kHz
Ant. Impedance ..... 50 Ohm
Power ..... 13.8 VDC ±15% at 1 amp
Dimensions ..... 8.5" x 3.5" x 10" 10 Lbs.

### OPTIONS

| | | | |
|---|---|---|---|
| *#3800* | **AS5000** | Antenna Switch 3/4 | **$114.95** |
| *#0657* | **ARD25** | APCO25 Decoder | **394.95** |
| *#4256* | **CR5000** | Recording cable | **29.95** |
| *#3801* | **CT5000** | CTCSS Decode | **98.95** |
| *#4257* | **DC3000** | DC Power cord | **8.95** |
| *#3852* | **MF500** | Collins Filter 500 Hz | **99.95** |
| *#0114* | **SDU5600** | Spectrum Display | **1449.95** |
| *#3871* | **TV5000A** | NTSC TV-Video Adapter | **369.95** |

## AR8600MkIIB

### SPECIFICATIONS

Frequency Range ..... 530 kHz - 3000 MHz (less cellular).
Modes ..... WFM, NFM, SFM, WAM, AM, NAM, USB, LSB, CW.
Power ..... 13.8 VDC 0.5 Amps
Antenna Impedance ... 50 ohm unbalanced
Selectivity (-6dB) ..... 3/9/12/20/25/150/380 kHz
Sensitivity ..... 2µV 1.9.-30 MHz AM
Memories ..... 1000 (20 banks)
Physical ..... 6.1x2.25x7.7 in 4.5 Lbs

The **AOR AR8600Mark IIB** is a versatile receiver which can be used virtually anywhere, mobile, base or trans-portable... powered from an external 12 VDC power supply, optional d.c. lead from a 12V vehicle or from an optional internally fitted NiCad battery pack. A strong twin metal case with die cast front panel characterizes the multipurpose role. All mode receive capability is provided including Single Side Band with programmable tuning steps down to a resolution of 50 Hz with the frequency established by a highly accurate TCXO. Center stage is a custom multi-section backlit LCD, numeric keypad, navigation keys, rotary tuning control and separate controls for volume and squelch control. The LCD can display alphanumeric text comments. The radio is manufactured with a metal chassis inside a metal cabinet to provide excellent screening characteristics and great robustness. The front panel is also manufactured from die-cast aluminium. Step may be programmed by the operator in any receive mode using multiples of 50 Hz in any mode (i.e. 5 kHz, 12.5 kHz or even 1.25 kHz). Extensive step-adjust and frequency offset facilities are also provided to ensure tracking of the most obscure band plans. A wide frequency coverage is available from 530 kHz to 3000 MHz (less cellular) with actual minimum acceptable frequency of 100 kHz. All mode receive: WFM, NFM, SFM (Super Narrow FM), WAM, AM, NAM (Wide, standard, Narrow AM), USB, LSB and CW. A 3.0 kHz SSB filter is employed with true carrier reinsertion resulting in non-offset frequency readout for easy tuning of SSB transmissions. An attenuator and noise limiter are also featured. Computer control is available via a 9-pin RS232 serial port. Free software is available as a download from the AOR web site. The AR8600 comes with an AC power supply, RA8600 telescopic antenna, medium wave plug-in antenna and manual. Order *#3299* has TV8600 installed.

**AR8600MkIIB** *Order #1860* **$889.95** **AR8600tvMkIIB** *Order #3299* **$1049.95**

### ACCESSORIES

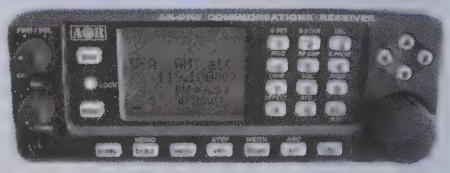
| | | | |
|---|---|---|---|
| *#1086* | **ASM8600** | External S-Meter | **$90.95** |
| *#1316* | **BP8600** | NiCad Battery Pack | **59.95** |
| *#1584* | **DC8600** | DC Cord | **12.95** |
| *#3851* | **MF-2.5** | Collins 2500 Hz filter | **99.95** |
| *#1215* | **MF-6** | Collins 6000 Hz filter | **99.95** |
| *#0419* | **TV8600** | NTSC Video TV Board | **124.95** |

### OPTIONAL SLOT CARDS

| | | | |
|---|---|---|---|
| *#1641* | **CT8200** | CTCSS Squelch | **$94.95** |
| *#1412* | **TE8200** | Tone Eliminator | **54.95** |
| *#2808* | **RU8200** | IC Sound Recorder | Discontinued |
| *#1829* | **EM8200** | External Memory | **74.95** |

**Notes:** The MF-2.5 and MF-6 are substitute filters, replacing the stock filters. Add $25 for installation. Full coverage, unblocked versions of AOR models are availabe for export or gov't. customers.

## AR-ONE



The **AOR AR-ONE** is a professional wideband communications receiver covering 10 kHz to 3.3 GHz in AM, FM, NFM, WFM, LSB, USB, CW modes. It provides laboratory grade stability of 0.1 PPM 14°~122°F and 1 Hz frequency display. It is optimized for surveillance and monitoring applications. The AR-ONE is designed for computer controlled operation and up to 99 receivers can be controlled by a single PC. (Software not supplied). Other advanced features include: ten VFOs and 1000 memories (10x100), attenuator and preamp. Scan and search with pass and delay are fully supported. The rear panel features two RS232 ports, multi-IF outputs (455 kHz and 10.7 MHz) and N type antenna input jack. The compact size of this radio is conducive to mobile or fixed applications. Includes Owner's Manual, AA5000-1 120 AC 60 Hz power supply and DC power cord. Please visit our website for full specifications. The AOR AR-ONE models, and other models marked *Restricted* on this page, can be purchased for government or for export *only*.

**AR-ONE** *Order #4560* **$4499.95**

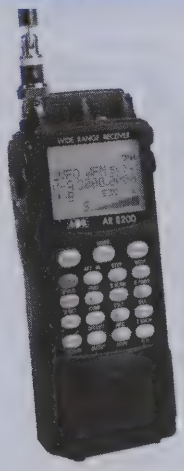
The **AOR AR ONE-C** is a special frequency and phase coherent version. See website for details.

**AR-ONE-C** *Order #1686* **$4989.95**

### OPTIONS

| | | | |
|---|---|---|---|
| *#3455* | **MM8600** | Mobile Bracket | **$69.95** |
| *#3680* | **EXT-ONE** | Separation Kit 16 Ft. | **274.95** |

## AR8200MkIIIB



- 500 kHz - 3000 MHz (less cellular)
- All Mode
- 1000 Memories
- 12 Characters per Memory
- 20 Search Banks
- Priority Channel
- Dual VFOs
- Thumbwheel Tuning Dial
- Programmable Step Sizes
- Signal Strength Meter
- Band Scope
- Backlit LCD & Keypad
- Battery Save Function
- Attenuator
- True Carrier Insertion SSB
- Removable MW Antenna
- Optional Slot-Cards
- Computer Control Port
- 12 VDC Input Jack

The **AR8200Mark IIIB** is an improved handheld receiver that covers 500 kHz to 3000 MHz (less cellular) in: Wide FM, Narrow FM, Super Narrow FM, Wide AM, Standard AM, Narrow AM, USB, LSB and CW. The side keypad has 4 arrow keys presented as a single rocker. 1000 Alpha memories in 20 banks are supplied. The scan-search rate is 37 steps/second. The AR8200 includes: 4 NiCad AA cells, charger, belt-clip, MW antenna and telescopic antenna. The state-of-the-art AR8200 even accepts plug-in slot card options (see below). This may be the best engineered and most capable handheld scanner ever! Now with TCXO, 8.33 kHz air step and more. 2.4"x6"x1.5"
List $839.95 *Order #0083* **$589.95**

### OPTIONAL SLOT CARDS

| | | | |
|---|---|---|---|
| *#1641* | **CT8200** | CTCSS Squelch | **$94.95** |
| *#1829* | **EM8200** | External Memory | **74.95** |
| *#2808* | **RU8200** | IC Sound Recorder | DISC |
| *#1412* | **TE8200** | Tone Eliminator | **54.95** |

### OPTIONS

| | | | |
|---|---|---|---|
| *#0880* | **ABF125** | Airband Filter (see pg. 40) | **$29.95** |
| *#4755* | **CC8200A** | PC Cable | **99.95** |
| *#3802* | **IF8200** | Raw Interface Cable | **19.95** |
| *#3843* | **LC8200** | Leather Case | **21.95** |
| *#3807* | **SC8200** | Vinyl Case | **12.95** |

### VIEW OPTIONS

To view options visit: **www.universal-radio.com**

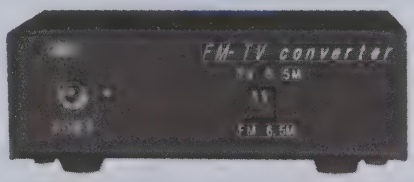
## TV5000A

The **AOR TV5000A** is designed expressly for use with the AR5000**A** series (AR5000AB, AR5000AU, AR5000A+3U, AR5000A+3B). The module mounts internally with no soldering required. It demodulates audio and video NTSC signals (not for PAL). It has the ability to handle conventional TV video broadcasts and security camera video often used above 2 GHz. The video is delivered to the AR5000A's mute jack. The audio will come from the radio's speaker. These jacks would typically connect to a composite video monitor (not supplied). Most newer televisions also have separate video and audio inputs, and could be used.
**TV5000A** *Order #3871* **$369.95**

## SDU5600

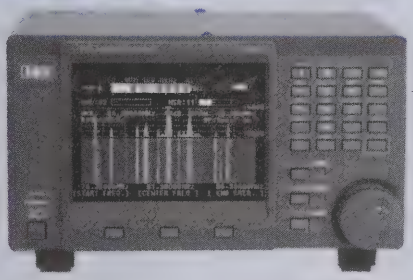
It has never been so easy to locate brief elusive transmissions. Coupled to the AR5000 or AR8600 series receivers, the **AOR SDU5600** provides a color spectrum display of 10 MHz bandwidth (± 5 MHz of center freq.)! Frequency resolution is 4, 32, 64 or 128 kHz. Digital signal processing and fast Fourier transform algorithms combine to make the SDU5600 a very powerful spectrum display. Menu driven operation: All facilities are within easy access through each dedicated function key and on-screen menu. Full interconnection with the AR5000 is achieved. The AR5000 can be operated from the SDU5600 enabling selection of center frequency, receive mode, etc. When connected with the AR5000, the SDU5600 virtually works as a spectrum analyzer over 10 kHz to 2600 MHz range as the center frequency always becomes the receive frequency. The high resolution, 5 inch diagonal color TFT is stunning. The SDU5600 comes with an AC power supply, BNC receiver cable and a DB9 serial control cable to connect to the AR5000. There is also a second DB9 serial jack on the back of the SDU5600 for PC control. The SDU5600 includes a 120 VAC adapter. (Please note that this is not a receiver, but rather, an option for a receiver).
**SDU5600** *Order #0114* **$1449.95**

## TVA1




The **AOR TVA1** is designed for use with the AR5000 series (and can also be used with the Icom R8500). It demodulates audio and video NTSC signals. The signal is tapped from the 10.7 MHz IF output of the receiver. There is a switch on the front to select either conventional broadcast NTSC TV [AM] or security camera TV [FM]. There is a second switch to select 5.5 MHz or 6.5 MHz FM subcarrier frequency. The TVA1 operates from 12 VDC with the supplied AC adapter. A 39 inch coaxial jumper cable with a male BNC at each end is supplied to connect the TVA1 to the receiver. There is an RCA phono jack for video and one for audio. These jacks would typically connect to a composite video monitor (not supplied). Most newer televisions also have separate video and audio inputs and could be used. Note that a VGA monitor will not work. The TVA1 is *not* suggested for the AR8600 series.
**TVA1** *Order #4605* **$309.95**

## SR2000

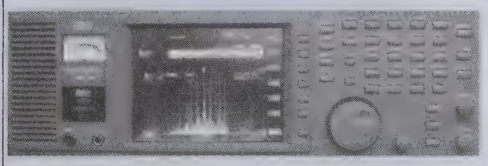


The **AOR SR2000** is a DSP powered spectrum display unit with high quality RF front-end, for professional users. The IF signal originating from the RF's front end is digitally processed, analyzed by high-speed Fast Fourier Transform, to allow a 10 MHz bandwidth wide spectrum to be displayed in real time. The FFT search can scan 10 MHz in as little at 0.2 seconds to instantly display transmitted signals. The RF front end covers a wide range from 25 MHz to 3 GHz with triple conversion superheterodyne in AM, NFM, WFM and SFM modes. The demodulated signal is amplified to a high-definition audio (AF) signal, which can be output to an external speaker (not supplied) for superb sound. Other feature highlights include: 1000 memories (10x100), 40 search bank memories, easy menu-driven operation and RS232 port.
**SR2000** *Order #2545* **$2699.95**

## SR2200

The **SR2200** is a black-box version of the SR2000 desgined expressly for computer control.
**SR2200** *Order #0156* **T.B.A.**

## AR-ALPHA



The **AOR AR-Alpha** covers 10 kHz to 3.3 GHz in WFM, NFM, AM (Synchronous AM, diversity synchronous AM), ISB, RZSSB, USB, LSB, CW, P25, TV (FM, AM NTSC/PAL). Digital signal processing is employed at both the IF stage and demodulating stage. Fast frequency processing is achieved by means of FFT. Dual ports support both RS-232C and USB. The 6 inch diagonal high resolution TFT color display supports spectral display (with water fall and up to 100 MHz width) as well as TV reception. 19 inch. (Expected 12/06).
**Alpha** *Order #1036* **T.B.A.**

✔ The special order **AOR SR2000, SR2200** and **Alpha** can be purchased for government or for export *only*. Visit our website for further details.

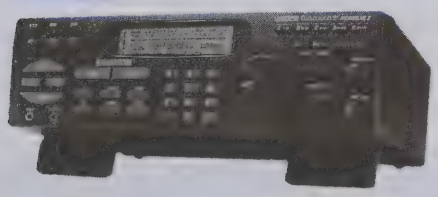
## Bearcat BC72XLT

- 29 - 30 Ham Band 10 M
- 30 - 50 VHF Low
- 50 - 54 Ham Band 6 M
- 108-137 Aircraft
- 137-144 Federal Gov't
- 144-148 Ham Band 2 M
- 148-174 VHF High Band
- 406-420 Federal Gov't
- 420-450 Ham Band 70 Cm
- 450-470 UHF Band
- 470-512 UHF "T" Band

The **Bearcat BC72XLT** is a very affordable 100 channel, ten bank scanner with great features. Frequency coverage is 25-54,108-174 and 406-512 MHz. It has Uniden's new Close Call™ RF Capture Technology that instantly tunes to signals from nearby transmitters. The Priority Scan function scans the channels you have designated as priority channels. The Delay function helps prevent missed replies during 2-way conversations. You also get six preprogrammed service searches: Public Safety, Railroad (by channel), Air, Marine (by channel), CB (by channel), GMRS/FRS (by channel), Weather, News Media, Ham Radio and Special. The backlit full frequency LCD display makes for easy night time operation. Operation is from two AA cells (not supplied). Use alkalines for long life or rechargeables for economy Only 2¾ x 4½ x 1½ inches. The BC72XLT comes with: AD008 AC adapter (6 VDC+), belt clip, flexible BNC antenna and Owner's Manual.

List $119.99 *Order #4072* **$89.95**

## Bearcat BC-898T



- 29 - 30 Ham Band-10 M
- 30 - 50 VHF Low
- 50 - 54 Ham Band-6 M
- 108-136 Aircraft
- 136-144 Federal Gov't
- 144-148 Ham Band-2 M
- 148-174 VHF High Band
- 216-400 UHF Air Band
- 400-420 Federal Gov't
- 420-450 Ham Band 70 Cm
- 450-470 UHF Band
- 470-512 UHF "T" Band
- 806-956 800 MHz Band (less cellular)

The **BC-898T** is a 500 channel, ten bank trunk tracking scanner. Supported trunk systems include: SMARTNET™, Motorola Type I/II/IIi, Hybrid and PRIVACYPLUS™, LTR and EDACS. There are 17 preprogrammed bands. Scan at 100 channels per second. Other features include: LCD dimmer, S-indicator, channel lockout, count key, manual tuning knob, weather alert, CTCSS/DCS decode, auto-store and ten priority channels. Jacks are provided for: BNC antenna, external speaker, record line output, auxiliary jack, 12 VDC power and PC port. With telescoping whip antenna, AC adapter, Operating Guide and Trunk Tracker Guide. 10.5 x 3.5 x 7.375 inches.

List $299.99 *Order #0898* **$219.95**

## Bearcat BC92XLT

- 29 - 30 Ham Band 10 M
- 30 - 50 VHF Low
- 50 - 54 Ham Band 6 M
- 108-137 Aircraft
- 137-144 Federal Gov't
- 144-148 Ham Band 2 M
- 148-174 VHF High Band
- 406-420 Federal Gov't
- 420-450 Ham Band 70 Cm
- 450-470 UHF Band
- 470-512 UHF "T" Band
- 806-956 800 MHz Band (less cellular)

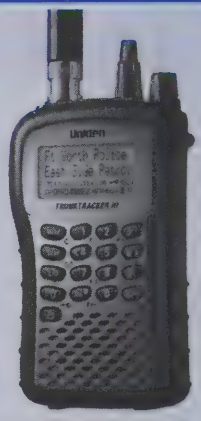
The **Bearcat BC92XLT** is an affordable 200 channel scanner that has Uniden's new Close Call™ RF Capture Technology that instantly tunes to signals from nearby transmitters. (You can even screen-out pager frequencies). Frequency coverage is 25-54,108-174,406-512,806-956 MHz (excluding cellular) to include the most interesting "action" bands where you can hear police, ambulance, fire, amateur radio, public utilities, weather and more. You get ten programmable search ranges to help you find unlisted frequencies in use in your area. Plus there are six preprogrammed service searches: Public Safety, Railroad (by channel), Air, Marine (by channel), CB (by channel), GMRS/FRS (by channel), Weather, News Media, Ham Radio and Special. The Priority Scan frequently scans the channels you have designated as priority channels. The delay feature helps prevent missed replies during 2-way conversations. Uniden's patented Backlight-On-Squelch feature illuminates the LCD only when there is channel activity. Operation is from two AA cells providing flexibility in choice of batteries: alkaline for long life, rechargeable for economy (batteries can be charged while in the scanner). Inside the battery compartment there is a switch for using either two AA NiMH cells or two AA alkaline cells (the AA cells are not supplied). Only 2¾ x 4½ x 1¼ inches. The BC92XLT comes with: AD008 AC adapter (+6 VDC), belt clip, flexible BNC antenna, wrist strap and Owner's Manual.

List $149.99 *Order #4092* **$119.95**

The **Dragon DC6VC** cigar-plug auto power adapter provides 6 VDC to operate BC72/92/246T.

*Order #0904* **$19.95**

## Bearcat BC246T



- 29 - 30 Ham Band 10 M
- 30 - 50 VHF Low
- 50 - 54 Ham Band 6 M
- 108-137 Aircraft
- 137-144 Federal Gov't
- 144-148 Ham Band 2 M
- 148-174 VHF High Band
- 406-420 Federal Gov't
- 420-450 Ham Band 70 Cm
- 450-470 UHF Band
- 470-512 UHF "T" Band
- 806-956 800 MHz Band (less cellular)
- 1240-1300 Ham Band

The **Bearcat BC246T** features third generation TrunkTracking III technology supporting Motorola, EDACS, and LTR Analog Trunking. The BC246T introduces several innovative features. The BC246T uses a new dynamically allocated memory system, allowing the user to program up to 2500 channels (1600 typical) into any configuration desired. While traditional scanners have been limited to only ten banks, the BC246T groups channels into systems, allowing for 200 or more systems to be programmed and scanned simultaneously. Systems can still be quickly enabled or disabled using the 0-9 keys, and each system can have up to 10 groups of channels that are also available for quick selection. Uniden's exclusive Close Call™ RF Capture Technology zeroes in on nearby transmissions without the need for programming, even when the BC246T is in other modes, scanning, searching or holding on a frequency. For example, if someone transmits within a few hundred feet (range depends on transmit power and other radio traffic in the area), the scanner immediately detects and tunes to the transmission, ideal for use at events when the frequency being used is unknown. And frequency coverage is great. You get VHF low, VHF High, VHF Air, UHF, 800 MHz Public Service (less cellular) and even the 1.24-1.3 GHz ham band. Other refinements include: cool keypad, SAME weather alert, backlit display, CTCSS/DCS rapid decode and compact size (4½" x 2¾" x 1¼"). The BC246T comes with two NiMH AA cells, AC adapter for internal recharging, belt clip, BNC antenna, DB9 PC serial cable, wrist strap and *Owner's Manual.*

List $299.99 *Order #0246* **$229.95**

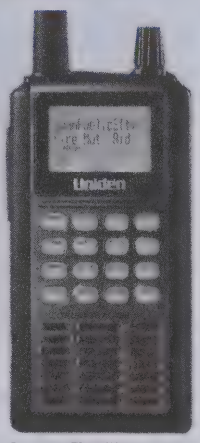
## Bearcat BC-370CRS

Using a scanner in a vehicle is restricted in some states.

The Bearcat **BC370CRS** is your perfect bed side companion. It is a fully capable scanner covering CB, VHF Low, VHF Air, VHF High, Military Air (225-380 MHz), UHF (406-512 MHz), 806-956 MHz (less cellular), *plus* it has a built in AM and FM clock radio. You get 300 scanning memories plus 10 AM and 20 FM presets. This model also features the new "SAME" weather channel technology allowing you to scan selected counties for weather alerts. External jacks for: BNC antenna, external speaker, AM antenna and external power. Requires three AA alkaline cells (not supplied) for backup. The BC370CRS comes with: AD-1008 AC adapter, BNC telescopic antenna, AM loop antenna and *Owner's Manual.* Size: 8.87 x 3.56 x 8.68 inches 2.51 pounds.

List $199.99 *Order #0370* **$149.95**

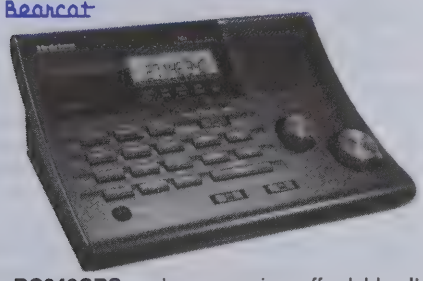
## uniden Bearcat BCD396T



The **Bearcat BCD396T** offers APCO 25 digital capability, allowing users to monitor the activities and signals of city and government service departments, utilizing advanced scanner technology in an all new compact, handheld design. Featuring APCO 25 capability, Uniden's BCD396T improves interoperability between large cities currently using the digital systems and those smaller municipalities that still operate on analog systems. Uniden's BCD396T will not permit users to monitor encrypted signals from national and local security organizations. Preprogrammed coverage for over 400 cities is built in! The Bearcat BCD396T also offers Close Call™ RF Capture Technology, Dynamic Memory Management, Fire Tone-Out as well as 5,500 channels. Frequency coverage is expected to be: 25-512, 764-776, 794-956, 1240-1300 MHz (excluding cellular) in AM/FM/NFM/WFM modes. Search steps will likely be: 5, 6.25, 7.5, 8.33, 10, 12.5, 15, 20, 25, 50 and 100 kHz. The BCD396T will meet the demands of both professionals, such as law enforcement officials, and scanner enthusiasts. This radio has eliminated the proprietary battery pack and removed the need for an add-in board for APCO 25, reduced the size of the model, and added a backlit keypad. A PC programming cable is included.

List $819.99 *Order #1396* **$529.95**

## uniden Bearcat BC340CRS



The **BC340CRS** makes scanning affordable. It covers VHF Low Band (25-54), VHF High Band (136-174) and UHF (406-512 MHz). It features 100 channels (10 banks of 10 channels), 10 AM and 20 FM/TV presets, priority channels, memory backup, weather scan, full frequency backlit LCD, lock-out and automatic squelch. This scanner also features an *AM and FM clock radio* with snooze. It also receives VHF TV audio (TV channels 2-13). External jacks include: BNC antenna, external speaker, AM antenna and external power. The BC340CRS comes with: AC adapter, BNC telescopic antenna, AM antenna and Owner's Manual. 8.25 x 6.125 x 3.125 inches.

List $139.99 *Order #0522* **$99.95**

## uniden Bearcat SC230

The **Bearcat SC230** Sportcat features dynamically allocated alpha-tagged memory channels (1600 typical, 2500 maximum) and Close Call™ RF Capture Technology to Instantly tune signals from nearby transmitters. The Quick Key System quickly selects the system or race you want to hear. Coverage is 25-54, 108-174, 216-225, 400-512, 806-956 and 1240-1300 MHz (excluding cellular). You get 10 programmable search ranges and 11 preprogrammed service searches. Other enhancements include: S.A.M.E. weather alert, search & store, backlit display with backlight-on-squelch. Your SC230 comes with: wrist strap, AC adapter, belt clip, two BNC antennas, serial PC cable (software not provided), two AA cells and Owner's Manual.

List $279.99 *Order #4230* **$199.95**

**FREE BONUS OFFER**

You will receive a free copy of ***Race Scanning*** with your SC230 purchase. This book is described on page 98.

## uniden BCT8

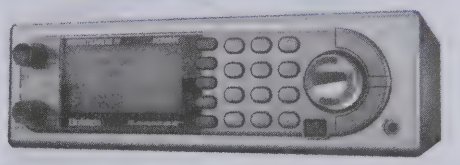
The **Bearcat BCT8** is a sophisticated, yet very affordable scanner that is both preprogrammed and user programmable. The BCT8 is fully preprogrammed for all 50 states. This scanner includes TrunkTracker III (EDACSTM, Motorola, E.F. Johnson) technology. You get 250 memories in five banks of fifty. Scan the CB band and receive all NOAA weather channels. The BCT8 can search up to 13 different frequency ranges including air band so you can discover new stations in your area. The large LCD is back lit. External jacks on the rear panel include: BNC antenna, DB9 RS232 PC port, external speaker and DC power. This radio comes with: AC adapter, DC power cable, a DC cigarette lighter cord, a BNC telescopic antenna, BNC window-mount wire antenna, Owner's Manual and PC CD. Size: 7.125 x 2.35 x 6.6" 38 oz.

List $249.99 *Order #2008* **$189.95**

The **BC350C** is a compact, 13 band pre-programmed scanner *without* TrunkTracking.

List $149.99 *Order #3417* **$109.95**

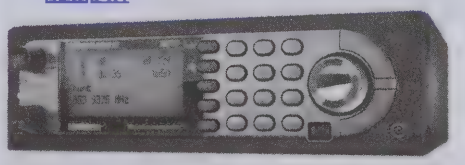
## uniden Bearcat BCD996T



The Uniden **Bearcat BCD996T** is a state-of-the-art scanner radio with Trunk Tracker IV™ technology. The BCD996T also introduces the first-ever GPS-enabled scanner, allowing the radio to automatically select nearby radio systems for scanning. The BCD996T also offers APCO 25 digital capability, to monitor city and government services. The Bearcat BCD996T also offers Close Call™ RF Capture Technology, Dynamic Memory Management, Fire Tone-Out, and Multi-site programming as well as 6,000 channels (500 systems) and a frequency range of 25 MHz to 1.3 GHz (excluding cellular and UHF TV frequencies).

List $699.99 *Order #0996* **$539.95**

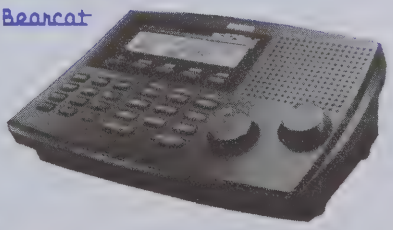
## uniden Bearcat BCT15



The 2500 channel **Bearcat BCT15** closely resembles the BCD996T, and also has Close Call® RF Capture Technology, TrunkTracker III, and is GPS compatiable. However, it does not have some BCD996T features such as TrunkTracker IV, APCO 25 capability, etc. The BCT15 and BCD996T each comes with: AD-1009 AC Adapter, Cigarette Lighter Cord, DC power cord, mounting bracket, push-on telescopic BNC antenna, PC serial cable and Owner's Manual.

List $319.99 *Order #0115* **$229.95**

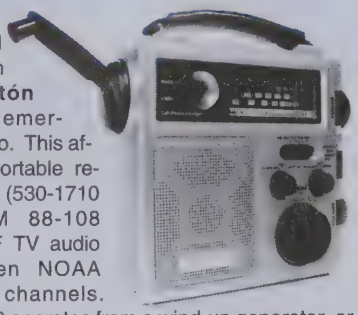
## uniden Bearcat BC-278CLT



The **Bearcat BC-278CLT** covers VHF-LO, Air Band, VHF-HIGH, UHF and the 806-956 MHz band (less cellular). It features 100 channels, priority channel, lockout, scanning at 25 channels per second, search functions, SAME weather and backlit LCD. Plus it is also an AM and FM clock radio with snooze! You can store ten AM stations and ten FM stations. Includes: AC adapter, BNC telescopic antenna, AM loop antenna and Owner's Manual. This radio has an external speaker jack. Size: 8.1 x 5.4 x 2.8".

List $199.99 *Order #4107* **$129.98**

## etón FR300



Be prepared and aware with the **etón FR300** emergency radio. This affordable portable receives AM (530-1710 kHz), FM 88-108 MHz, VHF TV audio and seven NOAA weather channels. The FR300 operates from a wind-up generator, or 4.5 VDC or 3 AA cells. The generator charges the supplied, replaceable NiMH cells and can even recharge certain cell phones (common cellular power adapters included). Two turns per second for 90 seconds will provide 40 to 60 minutes of operation. There is also a built-in triple LED light with emergency flash. The battery compartment holds the NiMH pack or the 3 optional AA cells. The Eton GPU3504 AC adapter is optional.

| | | |
|---|---|---|
| **FR300** | *Order #0032* | **$49.95** |
| **GPU3504** | *Order #0164* | **$9.95** |

## etón FR400

Be prepared and aware with the **etón FR400** emergency radio. This affordable portable receives AM (530-1710 kHz), FM 88-108 MHz, VHF TV audio and seven NOAA weather channels. The FR400 operates from a wind-up generator, or 4.5 VDC or 3 AA cells (not supplied). The generator charges the supplied, replaceable NiMH battery. Two turns per second for 90 seconds will provide 40 to 60 minutes of operation. The controls are easy to use. There is also a built-in triple LED light with emergency light source built into the side of the radio. Two of the LEDs are white for illumination, and the third is a blinking red LED for signaling. There is even a loud siren function in this device. The battery compartment allows access to the built-in NiMH pack or for the three optional AA cells. There are jacks on the rear panel for: earphone output, 4.5 VDC input and phone charger output. These jacks are protected under a water resistant rubber flap. The FR400 has the additional capability of recharging certain cell phones. Several common cellular power adapters are included with your FR400. This radio comes with a black canvas carry case, 4.5 VDC 120 VAC adapter, *Owner's Manual*, and mini *Red Cross Disaster Preparedness Guide*. 8.7 x 4.5 x 2 inches 1.3 Lbs. Makes a perfect gift for that person who has everything.

[Please also see the similar FR350 on page 8].

| | | |
|---|---|---|
| **FR400** | *Order #1400* | **$59.95** |

## etón ESP2000

The soothing sounds from the **etón ESP2000** let you experience total relaxation at the touch of a button. Mood setting tranquil landscapes like Restful Ocean, Summer Stream, Woodlands, Gentle Rain and Rhythmic Heartbeat. And you will always be precisely on time with the ESP2000 since it automatically sets itself 4 times per day to the U.S. Atomic Clock station. You can select 12 or 24 hour display format. It even adjusts for Daylight Saving and leap years. Dual alarm and snooze control with sleep-timer function. You can wake to soothing sounds, radio or buzzer. The large LCD with LED back lighting has a brightness control with auto dimmer. The indoor room temperature is displayed (32-122°F). The ESP2000 comes with an AC adapter and the three AA cells that serve as a battery backup during power interruptions. Size: 5.25 x 7.5 x 2.75 inches. Designed for indoor use, in the U.S.A. only.

| | | |
|---|---|---|
| **ESP2000 Silver** | *Order #4339* | **$48.98** |
| **ESP2000 Blue** | *Order #4360* | **$48.98** |

## etón FR100

The **etón FR100** *Blackout Buddy* is the essential emergency tool for every home. Designed to stay plugged into the wall for continuous charging and to be ready for any emergency, the *Blackout Buddy's* built-in LED light and AM/FM radio automatically turn on when the electricity goes out. The rechargeable battery provides enough power for hours of emergency AM/FM radio and light operation: 12-16 hours of LED light use, or 4-8 hours of radio use. It also serves as a convenient everyday plug-in clock radio and night light for any room in the home or office. The alarm feature wakes you up when you want (with or without power). The illuminated multi-function LCD with clock glows a soft blue when plugged in, serving as a night light. The telescopic antenna helps you receive important local radio broadcasts and there is even a headphone jack. Available in metallic silver or pearl white.

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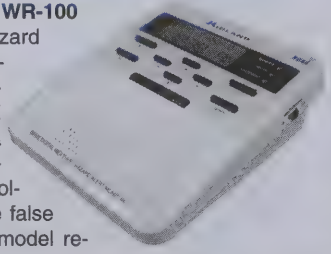
| Metallic Silver | *Order #0994* | **$29.95** |
| Metallic Pearl | *Order #0866* | **$29.95** |

## MIDLAND WR-100



The **Midland WR-100** digital, all-hazard alert radio features the latest SAME (Specific Area Message Encoding) technology to reduce false alarms. This model receives all seven weather channels. The eight character LCD displays different watches or warnings plus AMBER alerts. Three LEDs indicate *Statement, Watch* or *Warning*. You can select 90 dB Siren, voice alert, or flashing red LED. The WR-100 has an external jacks or antenna and optional accessories (strobe lights or pillow vibrators). This device also serves as a digital clock. Install three alkaline AA cells (not supplied) for power outages. 5 x 6 x 2 inches.

| | | |
|---|---|---|
| List $59.95 | *Order #1456* | **$37.95** |

## MIDLAND WR-300

The **Midland WR-300** all-hazard alert radio features the latest SAME technology including new AMBER alerts. Up to 30 areas may be programmed to reduce false alarms. The backlit three-line LCD displays 48 different watches or warnings. Three LED lights indicate: statement, watch or warning. The WR-300 has a telescopic antenna and external RCA phono antenna jack. There is also a 3.5mm accessory jack for keying optional external alert devices.. There is even an audio output jack for headphones or external amplifier. The built in digital AM/FM radio automatically switches to incoming alerts. The alert siren volume is adjustable. Install four AA cells (not supplied) to ensure use during power outages. Comes with 120 VAC power supply or it can operate from 10-12 VDC. 7.5x1.75x5.25 inches.

| | | |
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| List $89.95 | *Order #1450* | **$58.95** |

## First Alert WX-268

The **First Alert WX-268** is designed for use before, during and after emergencies by simultaneously monitoring broadcasts by *both* the Emergency Alert System (EAS) and NOAA Weather. Has advanced features such as easy location programming ... without FIPS codes! Power backup is via alkaline AA cells (not provided). Includes AC wall adapter.

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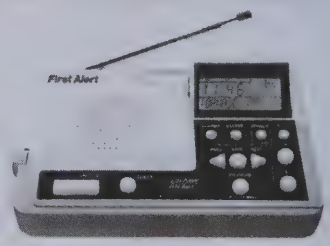
| List $129.95 | *Order #0737* | **$79.95** |



## SUPERADIO III

The **General Electric *Superadio III*** was designed specifically for long range AM and FM reception. It features tuned RF on both AM and FM for excellent sensitivity. Optimum selectivity is provided by 4 IF tuned circuits on AM and 3 on FM. A wide/normal switch allows you to control selectivity. Excellent sound is achieved via a 6½" woofer and 2" tweeter. Also includes: FM-AFC, bass and treble controls, mono mini earphone jack and fold-down handle. A built-in 7 7/8" ferrite rod antenna brings in distant AM stations. Screw terminals are provided for external AM & FM antennas. Coverage: 530-1700 kHz and 88-108 MHz with analog tuning. This radio is a favorite among medium wave DX'ers, out performing multiband radios costing much more. Powered from 120 VAC or six D cells (not supplied). 12½" x 10½" x 4½".
List $69.95 *Order #0547* **$59.95**

## C. Crane CC RADIO +

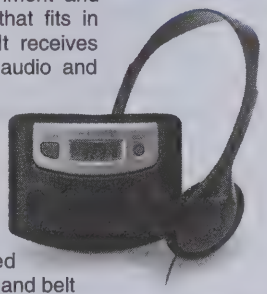
The **C. Crane CC Radio *Plus*** is a quality radio specifically designed for talk radio, news, sports and weather. Separate Bass and Treble controls, combined with the 5 inch speaker, provide a full sound. This digital radio tunes AM from 520 to 1710 kHz, FM from 87.5 to 108 MHz, VHF TV audio channels 2 to 13 and NOAA weather from 162.400 to 162.550 MHz. A special Weather Alert feature notifies you of weather emergencies. Fine tuning on the AM band is to 1 kHz. Operation of the radio is as simple as possible. Five stations can be stored into memory on each band. A clock alarm is also featured. This latest Plus version features a programmable timer, audio in-out jacks, signal strength meter, battery strength meter, audible band indicator, plus FM stereo through the headphone jack. This radio operates with the supplied AC cord or may be operated for up to 250 hours on four D cells (not supplied). Available in a mica black case or platinum silver colored case. 11 x 6.5 x 4". See the *C Crane VersaCorder* on page 93.

**CC+ Black** *Order #4403* **$164.95**
**CC+ Platinum** *Order #4404* **$164.95**

## SONY ICF-M410V

Here is an incredible value from Sony. This four band digital portable receives AM, FM, VHF TV audio plus the weather band! You can store 5 stations per band. The 3 inch speaker provides pleasant sound. The 12 hour digital clock-alarm continuously displays the time when the radio is off. This is a great emergency radio for when the power fails and makes a great gift. With mono earphone jack and hand strap. 8.6x4.2x1.7" 16 oz. Requires three AA cells (not supplied).
List $59.95 *Order #0410* **$44.95**

## SRF-M37



The **Sony SRF-M37V** Walkman is an entertainment and information center that fits in your shirt pocket. It receives AM, FM, VHF TV audio and NOAA weather. A total of 25 memories keep your favorite stations handy. This radio has a built in digital clock and Local/DX FM sensitivity switch. Supplied with stereo headset and belt holder. A neat radio and a great gift for anyone. Requires one AAA cell (not supplied).
List $34.95 *Order #2850* **$31.95**

## SRF-HM33

The **Sony SRF-HM33** is the ideal jogging or walking radio since it fits completely around your head. Enjoy AM, FM and FM stereo listening with 20 presets. The Mega Bass feature means a rich audio response. It even has a built-in digital clock. At only 5½ ounces it won't slow you down! Requires two AAA cells (not supplied).
List $44.99 *Order #2153* **$39.95**

## C. Crane MINI CC

The **C. Crane Mini CC** is a high performance, AM and FM radio with digital readout. It has a luxuriously large tuning knob with the touch, weight and accuracy that gives you complete control. The highest quality components and manufacturing methods ensure maximum longevity! Even the battery springs are made of stainless steel with just the right firmness to accept batteries easily, but hold up much better in use. It has jacks for Line In, Line Out, Antenna Input, Earphone. Size: 5.9 x 3.5 x 1.9.
**Mini CC** *Order #1585* **$149.95**

## MFJ-8214

The **MFJ-8218** was designed for the marine enthusiast. It receives AM 520-1720 kHz in 10 kHz steps, FM stereo 87.3-108.1 MHz in 100 kHz steps and the NOAA weather channels plus VHF marine channels: 01-28, 60-74 and 77-88. This radio features switches for FM stereo/mono, speaker on/off and lock. Thirty memory presets are available (ten per band). Operates from two AA cells (not supplied) or an external 3 VDC. Stereo ear buds included. Only 5.2 x 3 x 1 inches.
**MFJ-8214** *Order #4248* **$39.95**

## RANGER

The **Freeplay Ranger** provides AM-FM reception anywhere. The hand-powered generator provides 30 minutes of play from 30 seconds of winding. The crank handle stows away safely when not in use. Solar power cells will extend your energy duration in any light --- even totally driving the radio power in direct sunlight. The NiMH rechargeable batteries provide up to 4 hours of use. The included AC wall charger keeps the radio ready for long runs. 8 x 4 x 2.2" 1.6 Lbs. Available in deep translucent blue or deep translucent orange.
**RANGER Blue** *Order #3124* **$39.95**
**RANGER Orange** *Order #3682* **$39.95**

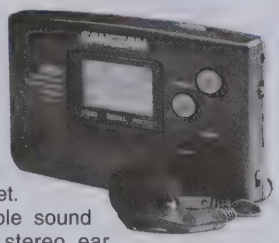
✔ The **Freeplay Sherpa** flashlight is on page 49.

## SONY ICF-C153V

The **Sony ICF-C153V** is your compact bedside companion that receives AM, FM, VHF TV audio and national weather stations (ch.1-7). This radio features three level brightness, softly backlit LCD display. It shows the time, or the frequency or channel number when tuning. 25 presets (10 FM, 5 AM, 5 TV and 5 weather) tune your favorite stations at the touch of a button. You can wake to the radio on Alarm A or a buzzer on Alarm B. The Sleep Timer may be set for 10, 20, 30, 40, 50 or 60 minutes and there is a snooze function for 10 more minutes of rest. Silver colored case 4.75 x 4.675 x 5 inches. 2.675 inch speaker. 120 VAC.
List $49.95 *Order #2688* **$39.95**

# SANGEAN

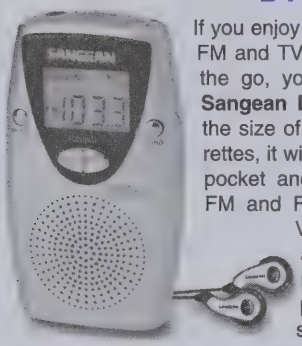
## DT-110



The **Sangean DT-110** provides concert hall quality in a compact AM/FM stereo receiver that slips conveniently into your shirt pocket. It plays unbelievable sound into the provided stereo ear buds. AM coverage includes the new extended band (520-1710 kHz). The digital display shows frequency and memory number. Other features include: Stereo-Mono Switch, Deep Bass Boost, 90 Minute Auto-Shut Off, Scanning and 9/10 kHz AM tuning steps. Only 3.54" x 2.24" x 0.78" and 3.15 oz. Requires two AAA cell (not supplied). Ninety day limited warranty. Available in gold or very interesting clear case.

**Gold Case** *Order #4502* **$39.95**
**Clear Case** *Order #2594* **$39.95**

## DT-210V

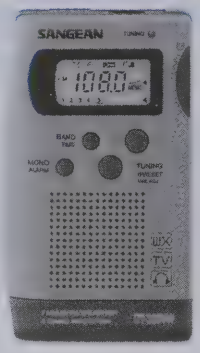


If you enjoy listening to AM, FM and TV audio while on the go, you will love the **Sangean DT-210V**. About the size of a pack of cigarettes, it will fit in your shirt pocket and receives AM, FM and FM stereo, plus VHF television audio. 25 memories are provided to store your favorite stations. Tune the bands with an up-down buttons or scan tuning will search the bands for you. Other features include: 90 minute auto-shutoff, low battery indicator, lock switch, built-in speaker, stereo-mono switch, mini earphone jack and light-weight stereo earbuds. Requires two AAA cells (not supplied). Coverage: 520-1710 kHz, 87.5-108 MHz and VHF TV channels 2-13. 2.25 x 4 x 1 inches. Ninety day limited warranty.
List $69.95 *Order #0210* **$54.95**

## DT-220V

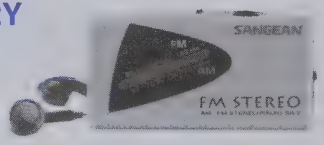
The **Sangean DT-220V** receives AM, FM plus VHF TV audio (Ch. 2-13). There are 25 presets. The built in clock alarm wakes you to music or buzzer. Other features include memory scan, auto shut-off, lock, and stereo-mono switch. One of the coolest innovations is a push-button ear bud retraction system. A press of the button on the back panel winds the stereo ear buds back into the radio. 4.9 x 3 x 1 inches 6 oz. Requires two AA cells (not supplied) or 3 VDC. With a carry case and ninety day manufacturer's limited warranty.
List $89.95 *Order #2220* **$69.95**

## DT-300VW



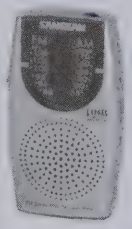
Sangean has created a marvel of miniaturization in the **DT-300VW**. Imagine a pocket-sized *digital* receiver that receives AM, FM, FM stereo, VHF television audio *and* the weather band! You will use this radio at home, at work, while outdoors and as an excellent source of information during bad weather. 36 presets are provided to store your favorite stations. Tuning on all bands is easy with an up and down button. Scan Tuning will search the bands for you and stop for 3-4 seconds on each active signal. Other features include: auto-shutoff, LED tuning indicator, built-in speaker, clock, alarm and 1-180 min. timer, earphone jack and lightweight stereo earbuds. Coverage: 520-1710 kHz, 87.5-108 MHz and VHF TV channels 2-13. Includes belt carry pouch. 3.9 x 2.35 x .75". 3.4 oz. Requires two AAA cells (not supplied). Ninety day limited warranty.
List $99.95 *Order #3262* **$69.95**

## SR2Y



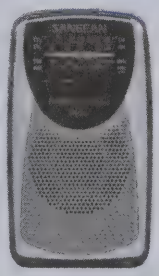
The pocket sized **Sangean SR-2Y** is only the size of a cigarette lighter, but produces a big AM-FM sound to the supplied stereo earphones (no speaker). Has Stereo/Mono switch and Deep Bass Boost. Includes an armband holder for jogging or walking. Requires one AAA cell, not included. Yellow 3.2 x 1.5 x 0.5" 1.5 oz.
List $39.95 *Order #0090* **$24.95**

## SR3



Sangean ingenuity brings you the **SR3** superbly styled, fit-in-your-pocket AM/FM Stereo Radio. The Deep Bass Boost feature yields extraordinary sound quality. Newly styled stereo ear buds and neck strap are included plus a trailing antenna. Has Stereo-Mono switch. Requires one AAA cell (not supplied). 1.5 x 3 x 0.6"
**SR3** *Order #1103* **$34.95**

## SR-25V

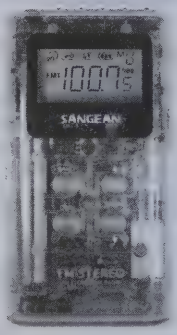


The pocket sized **Sangean SR-25V** analog portable radio receives AM, FM and VHF TV audio (channel 2 to 13 in two bands). Put your favorite TV shows in your pocket! This silver and black radio has an analog dial, red LED tune indicator and a mini earphone jack. It is only 2.7 x 4.9 x 1.15" 7.5 oz. Includes wrist strap. Requires two AA cells (not supplied).
**SR25V** *Order #1090* **$24.95**

## DT-200V

The **Sangean DT-200V** is about the size of a pack of cigarettes, it will fit in your shirt pocket and receives AM, FM and FM stereo, plus VHF television audio. 19 memories are provided to store your favorite stations. Tuning on all bands is easy with an up and down button. Scan Tuning will search the bands for you and stop for 3-4 seconds on each active signal. Other features include auto-shutoff, lock switch, removable belt clip, built-in speaker, stereo-mono switch, earphone jack (3.5mm) and lightweight stereo earbuds. Ninety day limited warranty. Requires two AA cells (not supplied). Coverage: 520-1710 kHz, 87.5-108 MHz and VHF TV channels 2-13. 2.675" x 4.375" x 0.75". 5 oz.
List $89.95 *Order #2605* **$59.95**

## DT-120



The **Sangean DT-120** provides concert hall quality in a compact AM/FM stereo receiver that slips conveniently into your shirt pocket. It plays unbelievable sound into the provided stereo ear buds (no speaker). AM coverage is 520-1710 kHz and this radio has 10 memories for FM and 5 for AM. The DBB Deep Bass Boost provides an amazing rich, deep sound for such a compact radio. Other features include: Stereo-Mono Switch, 90 Minute Auto-Shut Off, Battery Low Indicator, Scanning and 9/10 kHz AM tuning steps. Only 2 x 3.7 x 0.7 inches and 2 oz. Requires one AAA cell (not supplied). Includes stereo ear buds. Ninety day limited warranty. Available in clear (shown) or white case.

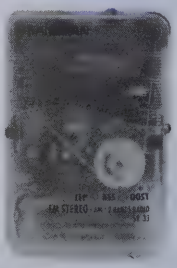
**DT120 CLEAR** *Order #1048* **$44.95**
**DT120 WHITE** *Order #0120* **$44.95**

## DT-180V

The **DT-180V** series is similar to the DT-120 series, but *additionally* receives VHF TV audio (TV channels 2-13). Available in white or black.

**DT180V WHITE** *Order #4180* **$54.95**
**DT180V BLACK** *Order #4181* **$54.95**

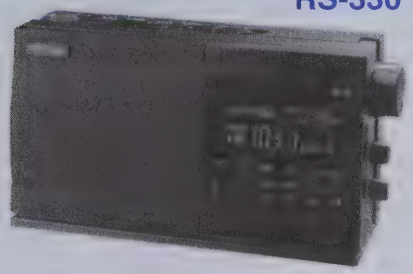
## SR33



The **Sangean SR-33** is a clear, fit-in-your-pocket AM/FM Stereo radio with Deep Bass Boost. It offers exceptional stereo sound quality. Comes with stereo ear buds and built in belt clip. Has Stereo-Mono switch. There is a green LED for tuning and a red LED for stereo. Requires two AAA cells (not supplied). This analog radio fits the restrictive requirements of many prisons since it has no built-in speaker and has a clear case. 2.8 x 4 x 0.8 inches. Ninety day limited warranty.
**SR33** *Order #3085* **$21.95**

# SANGEAN

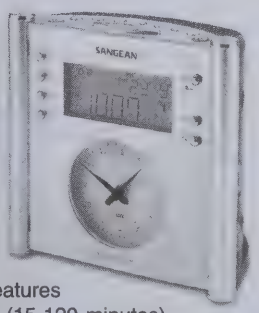
## RS-330



The **Sangean RS-330** is an advanced AM/FM clock radio. It features digital tuning with a fluorescent display and automatic brightness control. The front panel control buttons are back-lit for ease of use at night. There are two independent alarm systems with gradual ramp-up of alarm or music volume. A five minute snooze control is also built in. The five inch full range speaker with four watt amplifier provides a high fidelity sound which can be adjusted to your taste via separate Bass and Treble controls. An auxiliary input accomodates a tape deck or CD player. There is also a Line Out facility. A mini headphone jack is available for private listening. Tuning is via manual knob or presets. Tunes 520-1710 kHz AM and 87.5-108 MHz FM. There are terminals for the AM antenna, the FM antenna and ground. 11.5x6x3" 5.5 Lbs. 117 VAC 60 Hz.
List $149.95 *Order #0260* **$109.95**

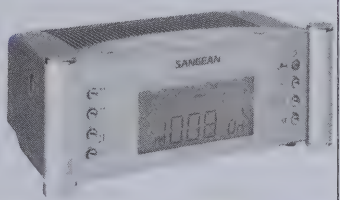
An optional **RS-332** powered speaker and control has its own 4 watt amplifier, volume controls and display, plus it provides a second alarm.
**RS332** *Order #4321* **$79.95**

## RCR1



The **Sangean RCR1** is an advanced AM/FM clock radio. The time is precisely synchronized by the WWVB time station in Boulder, Colorado and is displayed via the LCD *and* an analog dial. Advanced features include: Sleep timer (15-120 minutes), snooze, a dual time HWS *Humane Waking System* to gently ease you out of your slumber. There is also a Tone control and a headphone jack. The 3 by 4 inch speaker delivers pleasant sound from the 800 mw amplifier. Tunes 520-1710 kHz AM and 87.5-108 MHz FM with 7 memories per band. Requires 117 VAC 60 Hz. 6.7 x 6.8 x 4.2 inches.
List $129.50 *Order #1819* **$89.95**

## RCR2



The **RCR2** is similar to the RCR1, but without the analog clock face. 14 station Memories are available (7 for AM and 7 for FM).
List $99.50 *Order #1810* **$64.95**

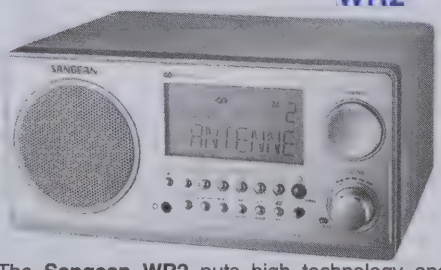
## U1

The **Sangean U1** is a rugged AM, FM utility radio that is made to stand up to the the weather. It is water resistant to JIS4 standards and has been ruggedized for the construction or camp site. It has a smooth rotary 5:1 vernier tuning knob and LED tune indicator. The 6.5 inch full range speaker and Deep Bass Boost combine for impressive sound. The U1 has an AC wire compartment with 6 foot AC cord. It can also be operated from six D cells (not supplied) or exteranl 9 to 14 VDC. There is an 3.5mm AUX input for an external audio source. There is also a ¼ inch mic input jack so it is public address capable with optional mic. 10.25x14.5x10" 9 Lbs.
List $119.50 *Order #0579* **$99.95**

## WR1

With the **Sangean WR1**, distant AM and FM stations are brought to your door step through advanced RF/IF electronic circuitry. The enclosure is acoustically balanced and the enhanced frequency response, front firing speaker provides rich room filling sound. The acoustic bass compensation and 7 watt amplifier give this small radio a big sound. Antenna input for AM and FM plus headphone jack. With vernier tuning, band indicator and auxiliary input jack. 9.5x4.5x6" 117 VAC.
**Walnut** *Order #4394* **$99.95**
**Silver-Gray** *Order #2784* **$99.95**

## WR2



The **Sangean WR2** puts high technology and incredible sound on your night stand or desk. The enclosure is acoustically balanced and the enhanced frequency response, front firing speaker provides rich room filling sound. The acoustic bass compensation and 7 watt amplifier give this small radio a big sound. Advanced features include: backlit 4 level LCD, lock with alarm (radio or buzzer), bass compensation, full range bass and treble control, auxiliary input jack, stereo headphone jack, 10 memory presets, F type antenna jack and RDS. Preset and clock values are automatically saved up to 30 minutes during power interruptions. Additionally, the WR2 comes with a full-featured infra-red remote control! Antenna input for AM and FM plus headphone jack. With digital tuning and selectable auxiliary input jack. 9.5x4.5x6" 5 Lbs. Requires 117 VAC 60 Hz.
**WR2 Walnut** *Order #3281* **$149.95**
**WR2 Black** *Order #3282* **$149.95**
**WR2 White** *Order #3283* **$149.95**

## U3

The **Sangean U3** AM, FM utility radio is made to stand up the the weather. It is water resistant and has been ruggedized for the construction or camp site. It has a smooth rotary tuning knob and backlit digital dial. There are five presets for AM and five for FM. The 6.5 inch, 7 watt full range speaker and Deep Bass Boost combine for an awesome sound. There is even a built-in digital clock alarm (buzzer or radio) with sleep and snooze functions. The U3 has an AC wire compartment with a heavy six foot AC cord. This rugged radio is great for camping, the garage or at the work site. It can also be played from six D cells (not supplied) and may be operated from external 9 to 14 VDC. There is an AUX input for an external audio source. 10.25 x 14.5 x 10 inches 9 Lbs.
List $169.50 *Order #2029* **$138.95**

## PR-D2V

The **Sangean PR D2V** is at home on a book shelf, in the kitchen or on the go! This AM, FM clock radio features PLL synthesized rotary tuning plus Up-Down tuning buttons. The large LCD is backlit with a digital *and* analog dial. AM band tuning is from 520 to 1710 kHz in 1 kHz steps and FM is from 87.5 to 108 MHz in 50 kHz steps. It also receives VHF TV audio. There are 5 presets on each band. The built in clock alarm wakes you to music or buzzer. The PR D2V alarm utilizes a Humane Wake System that will increase the alarm volume every 15 seconds. A sleep function may be set for 90, 60, 30 or 15 minutes. Amazing sound results from the 5 inch full range speaker and 1.5 inch tweeter. FM stereo is supplied to the stereo mini headphone jack and there is a Mono-Stereo switch and tone control. This radio has a removable AC cord (not a wall wart!) and can also be operated from four D cells (not supplied). Only 7 x 5 x 7.5" 4 Lbs.
List $129.50 *Order #4553* **$89.95**

# SANGEAN

## HDR-1

The **Sangean HDR-1** is a table top radio capable of AM, FM and FM-HD *High Definition* stereo reception. There is an Aux IN for playing iPOD or MP3 player. The display can show: channel number, channel frequency, ensemble label, service label, dynamic label, transmission mode, data rate and secondary service availability indicator. Other refinements include: Auto tuning list for program service (TBC), Automatic multiplex re-configuration, Real time clock with Alarm and Sleep function, Multi-cast capability (same frequency providing various services) and PAD program associated data services. Enjoy EQ selections and digital Bass-Treble setting plus optional 3D effect. Other features include: backlit LCD, wake to buzzer or radio (HWS), snooze, radio controlled clock with date, weekday and year, 10 presets for AM and 10 for FM. Audio output is 3W+3W RMS at 10% THD. Includes infrared remote control. 11.5 x 4.5 x 7.5 6.6 Lbs. 120 VAC 60 Hz. Expected 12/06.

*Order #0111* **T.B.A.**

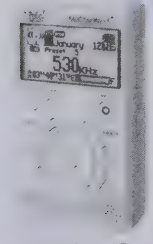
**Special note regarding the Sangean HDR-1:** This device has not been approved by the F.C.C. This device may not be offered for sale or lease or be sold or leased until approval of the F.C.C. has been obtained.

## MMR-77

The **Sangean MMR-77** is a compact AM, FM radio that is just great for camping or emergency use. The MMR-77 is water resistant, has an illumination lamp plus an emergency buzzer. It is dynamo powered. Wind it for about a minute to enjoy up to 30 minutes of listening. You can also use this radio in a conventional manner when you install two AA cells (not provided) or add an AC adapter (not provided). There is an LED for radio tuning and one to indicate charging. With earphone jack.

List $49.00 *Order #0477* **$39.98**

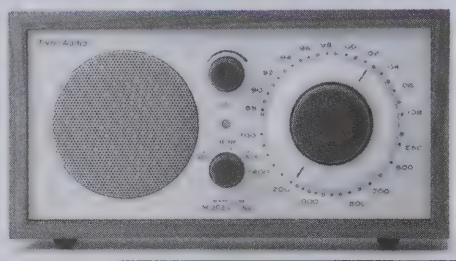
## RADIO YourWay LX



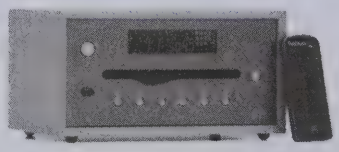
The **Radio YourWay LX** gives you the ability to record your favorite AM and FM radio programs and play those recordings back at a more convenient time. This cool device also has MP3 Recording to easily transfer and archive your recordings to a PC or MAC with an available USB port. You can also record from another audio source (shortwave radio, CD, cassette, TV, etc.) in MP3 format without the use of a PC! The internal 128MB memory stores 8.5 hours of audio. If you need even more capacity you can plug in SD Memory cards (not supplied). Playback is via MP3, WMA or RVF files. Direct MP3 encoding at 32/64/96/128/192/256/Kbps. Operates up to 15 hours play with a 4 hour charge. 2.36 x 3.93 x 0.78 inches, 3 oz. Includes: stereo earphones, USB, FM and Line-In cables plus AC adapter.

*Order #0034* **$199.95**

# Tivoli Audio



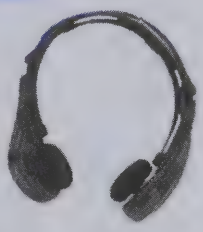
## MODEL CD



The **Model CD** is the perfect complement to your Model One table radio or the Model Two stereo radio. The minimalist front panel sports a large, easy to read display paired with the primary controls. The credit card sized remote control adds Shuffle, Repeat, Volume, Intro, and Direct Track Access functions. Plays CDs and CDRs. Cherry wood cabinet. Includes connecting cable.

**MODEL CD** *Order #3225* **$199.99**

## Soltronix HR-1



The **Soltronix HR-1** is a solar-rechargeable AM-FM stereo headphone radio. It uses the advanced PowerFilm™ technology developed by Iowa Thin Film Technologies. This eliminates the inconvenience and cost of replacing batteries. It uses a patented ultra-light, durable solar module designed from NASA spin-off technology. The HR-1 will *automatically* recharge itself when in sunlight, even while listening. When fully charged, the headphones will play for more than 20 hours inside and outside. A one hour of charge in full sunlight provides 1 to 3 hours of listening. The sound is quite impressive, especially with the Extended Bass feature turned on.

List $39.95 *Order #0616* **$29.95**

## CROSLEY RECREATIONS

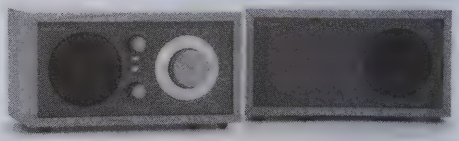
Please visit the *Vintage Radio Recreations* section of our website to view Crosley replicas of classic radios from the 1930s, 1940s and 1950s.

## MODEL 1

Where performance and simplicity are paramount but space is sparse, the **Tivoli Model One** mono table radio fits the bill. With just three knobs, it is the antithesis of today's ever more complex electronic products. But behind the Model One's simple, innocent appearance, hides a multitude of technology facilitating higher sound reproduction and better reception over anything else near it in size or cost. The furniture-grade, handmade wood cabinet is not just for appearance sake, but also doubles as an acoustically inert housing. A heavy-magnet, long-throw 3-inch driver is allied with a multi-stage frequency contouring circuit that adjusts the speaker's output over half-octave increments. The result is musically accurate tonal balance and bass response. Its geared-down 5:1 tuning ratio permits easy and accurate tuning. Jacks for earphone, auxiliary input and record out plus F antenna input. With AC cord and FM ant.

| | | |
|---|---|---|
| **Walnut/Beige** | *Order #1969* | **$119.99** |
| **Cherry/Blue** | *Order #0494* | **$119.99** |
| **Maple/Green** | *Order #2536* | **$119.99** |

## MODEL 2



The two-piece **Model Two** provides stereo right– and left. Placing the matching stereo speaker, with its 15' of cord, several feet from the main unit provides the detailed imaging and accurate soundstage that is so essential for true stereo reproduction. Offered in Metallic Taupe/Cherry.

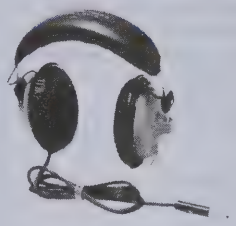
**M2TPE** *Order #3090* **$199.99**

## PAL

Now you can enjoy the Tivoli Model One's trademark sound and reception quality outdoors. The **Tivoli PAL** offers unprecedented fidelity in a weather resistant, compact package. Your PAL can keep you company by the pool or the patio. And its environmentally-friendly rechargeable Nickel Metal Hydride battery pack has no memory and fully charges in about 3 hours, providing many hours of cordless playback. A clever little green LED serves as both a power and battery status indicator. The PAL borrows the same geared-down 5:1 ratio analog tuning dial as used in the critically acclaimed Model One radio for easy, accurate tuning. Also on tap is an auxiliary input to connect a CD, MP3 player, or other device, plus a stereo headphone output jack for private listening (or as a record output). NiMH battery pack and AC adapter included. One year warranty.

| | | |
|---|---|---|
| **PALBLK** Black | *Order #4646* | **$149.99** |
| **PALBLU** Blue | *Order #0364* | **$149.99** |
| **PALGRN** Green | *Order #0421* | **$149.99** |
| **PALRED** Red | *Order #1028* | **$149.99** |
| **PALYEL** Yellow | *Order #2013* | **$149.98** |
| **PALiPOD** White | *Order #4647* | **$149.99** |

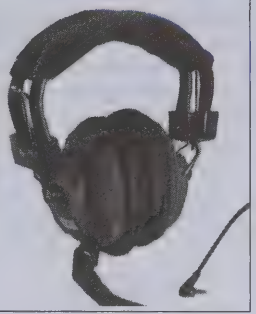
## JRC Japan Radio Co., Ltd. ST-3



Not surprisingly, our finest communications headphones are made by the Japan Radio Corporation. Each earpiece, plus the headband, are padded for a luxurious feel. Excellent voice-CW response (20-18000 Hz) for exceptional clarity. The last headphones you will ever buy. Will work nicely with all communications receivers we sell. Black. 600 Ohms. With ¼" mono plug.

*Order #0682* ..... $**69.95**

## Vanco HF24RS



The **Vanco HF24RS [RT24]** mono headphones feature padded headband and earpads plus individual volume controls for each ear. The coiled cord terminates in a right angle 3.5 mm mono mini headphone plug. Here is a great way to hear your scanner or radio at a noisy sports event such as a car race. Red color.

*Order #1040* ..... $**18.95**

## ICOM HP-4

The new **ICOM HP-4** monaural communications headphones are very light weight (1½ ounces!) and made specifically for use with the R2, R3 and R10. 48 Ohm with 38" cord and mini stereo plug (not ¼").

*Order #1446* ..... $**22.95**

## PYRAMID HP-30

The **Pyramid HP-30** stereo-mono headphones feature padded headband and earpads plus individual volume controls for each ear. There is even a stereo - mono switch. Coiled 6 foot cord with mini stereo plug and an adapter to convert it to ¼" stereo plug. 32 Ohms.

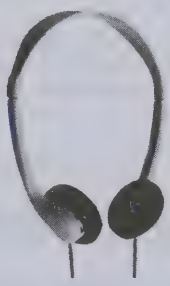
*Order #2280* ..... $**17.95**

## KENWOOD HS-5

The **Kenwood HS-5** deluxe communications headphones offer comfort and performance at a modest price. Black metal and plastic. 8 Ohms. ¼" mono plug.

*Order #0357* ..... $**74.95**

## SONY MDR



These are hi-fidelity stereo headphones designed to work with the several portables we sell that support stereo output to a mini headphone jack. Black color and feature a light weight cord. 24 Ohms. Rated at 20-20000 Hz. 2 ounces. With mini stereo plug only (not ¼").

*Order #0233* ..... $**6.95**

## KENWOOD HS-6

The **Kenwood HS-6** communications headphones are designed for the listener who prefers a very lightweight headphone. Includes pair of spare ear pads. 100-10000 Hz response. 4 ounces. 12.5 Ohm. ¼" mono plug.

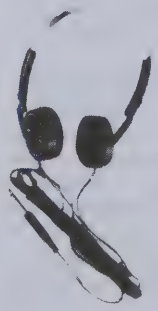
*Order #0358* ..... $**59.95**

## HEIL SOUND QUIET

The **Heil Quiet Phones** use two small mics placed deep inside the headphones that listen to the outside as well as the program 'noise'. Wired out of phase and feeding the in-line differential amplifier powered by a single AA cell - everything below 400 Hz is gone. Blower noise, ambient noise, TV in the next room vanishes. With right angle 1/8 inch mini stereo plug. With green LED adjustable head band and leatherette padded earpads. A mini stereo to 1/4 inch stereo adapter plug is included. Operates on a single AA cell (not included) for 30 hours providing clean high fidelity dual channel sound - with or without the active noise cancellation.

*Order #4595* ..... $**93.95**

## YAESU YH-77STA



The **YH-77ST**'s are light weight stereo communications headphones designed primarily for use with the Yaesu FT-900, FT-990, FT-1000 and FT-1000MP transceivers, but will also work with most newer communications receivers that support a stereo jack. Adjustable. With ¼" stereo plug.

*Order #2342* ..... $**49.95**

■ Unlike hi-fidelity headphones which are designed for maximum frequency response, communications headphones have a shaped response to enhance voice-CW frequencies only.

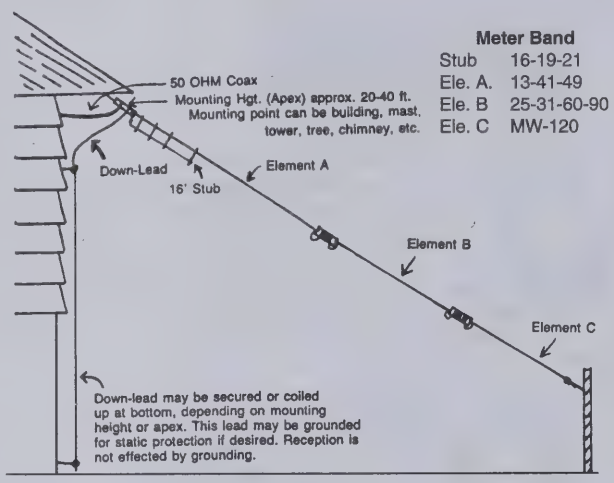
# ALPHA DELTA

## DX-SWL SLOPER

The **Alpha Delta DX-SWL** Sloper antenna offers exceptional features and performance! Hams have been using slopers for years because they offer some unique advantages not found in other antennas. Sloper (or slant) antennas require only one elevated support (25 feet or higher) while dipoles require two elevated supports. The DX-SWL Sloper offers coverage of the 90 and 120 meter bands, bands often "forgotten" by other antennas; plus medium wave too! The full-size DX-SWL covers:

| | | | |
|---|---|---|---|
| Medium Wave .5-1.6 MHz. | 120 Meters 2.3-2.5 MHz. | 90 Meters 3.2-3.5 MHz. | 60 Meters 4.7-5.0 MHz. |
| 49 Meters 5.9-6.2 MHz. | 41 Meters 7.1-7.3 MHz. | 31 Meters 9.5-9.9 MHz. | 25 Meters 11.6-12 MHz. |
| 21 Meters 13.6-13.8 MHz. | 19 Meters 15.1-15.6 MHz. | 16 Meters 17.5-17.9 MHz. | 13 Meters 21.4-21.8 MHz. |

The overall length of the slope wire is only 60 feet long. A single 50 ohm feed point (for PL259) at the apex of the antenna is provided for maximum DX reception. (User supplies their own 50 ohm coaxial lead-in). The DX-SWL is fully assembled for easy installation. It requires no adjustments or "trimming". This American made antenna has stainless steel hardware for long life and utilizes low-Q RF choke-resonators for efficient multiband frequency selection. For quality of construction, ease of erection and maximum performance, we think the Alpha-Delta DX-SWL is a great value. It is our best selling shortwave antenna.




Where less space is available, consider the **DX-SWL-S** shortened version - only 40 feet long covering the 90 through 13 meter bands.

**Alpha Delta DX-SWL** (MW+120-13m) 60 ft.
*Order #0799* ..... $**86.95**

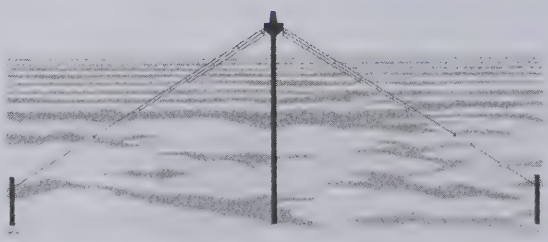
**Alpha Delta DX-SWL-S** (90-13m) 40 ft.
*Order #2533* ..... $**85.95**

See page 43 for optional preassembled lead-in cables.

# ALPHA DELTA

## DX ULTRA

The **Alpha Delta DX-ULTRA** is specifically designed for high performance, *full spectrum* shortwave coverage plus MW. Absolutely remarkable low-noise, high-gain results are achieved as a result of the tapered wing design and ISO-RES inductors and parallel wire elements. The Delta-C Center insulator with built-in SEP Arc-Plug static protectors, provides protection for sensitive receiver components. This antenna must be center fed with a PL-259 type plug. Fully assembled - no cutting or soldering required.



**Alpha Delta DX-Ultra** (0.5-30 MHz) 80 foot
*Order #3377* ..... $**126.95**

Support poles shown, not included. Please see page 43 for optional preassembled coax lead-in cables.

ANTENNA SUPERMARKET

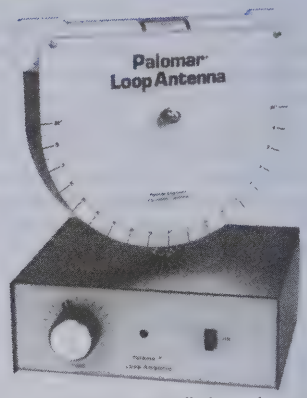
## EAVESDROPPER SWL SLOPER

The Antenna Supermarket company, famous for their **Eavesdropper** trapped dipole, also offers a sloper design antenna that covers all the major shortwave broadcast bands 120 through 11 meters plus medium wave. It requires one high support like the DX-SWL above and includes PL-259 type fitting for user supplied lead-in. 67.5 ft. long. Now includes integrated ZapTrapper™ lightning arrestor. Note: Please see page 43 for preassembled coaxial lead-in cables.

**Eavesdropper SWL Sloper**
*Order #0013* ..... $**79.95**

# PALOMAR ENGINEERS

## LA1




While loop antennas generally have less gain than wire antennas, they do offer directionality and low noise reception. Rotating the loop can help eliminate interference or noise. Deep nulls permit the listener to "null out" nearby stations to permit DX reception. The loop can also facilitate direction finding. The **Palomar LA-1** is the amplifier-mounting base which the various optional loops plug into. The LA-1 is 7" x 6" x 2" and is housed in an aluminum case. Controls include Tune and On-Off. Output is 50-75 ohms to a standard SO-239. The LA-1 will operate for a long time on a single 9 volt battery (not supplied) Each loop covers a certain portion of the frequency spectrum. The loops rotate 360° in azimuth and tilt ±90° in elevation. You will need a short coaxial jumper cable to connect the LA-1 to your communications receiver (or optional LC1 coupler *#2237* $49.95 if connecting to a portable AM receiver).

**Palomar LA-1 Loop Amp-Base**
*Order #0445* ..... $**129.95**

**50-150 Loop** 50-150 kHz
*Order #3001* ..... $**144.95**

**150-550 Loop** 150-550 kHz
*Order #1232* ..... $**129.95**

**530-1700 Loop** 530-1700 kHz
*Order #0446* ..... $**129.95**

**1700-6000 Loop** 1700-6000 kHz
*Order #1276* ..... $**129.95**

STUF

The **Cross Devices STUF** is an ultra low density, macroscopic foam paste filler specifically formulated for internal weather-protection of all types of coaxial connectors. It prevents moisture infiltration by occupation. One 2 ounce tube contains 3.2 cubic inches by volume. Reduces insertion loss, especially at UHF and above.
*Order #1218* $**4.99**

AOR

## LA380

The **AOR LA380** is a new wideband HI-Q active receiving loop antenna. The antenna covers from 10 kHz to 500 MHz. The built in amplifier provides up to 20 dB of gain. There are also two presets for 40 kHz (Japanese time station), 60 kHz (USA/UK time stations). Variable tuning is available for 3 to 40 MHz and fixed tuning for 60 kHz to 3 MHz and 40 to 50 MHz. This indoor antenna is ideal when space is at a premium. Output is via a BNC jack and a BNC to BNC patch cable (39 inches) is supplied. A 120VAC power supply is included.

**LA380** *Order #0380* **$369.95**

AMECO

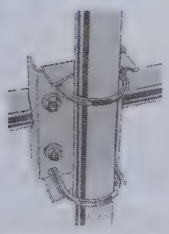
## TPA

The **Ameco TPA** is a dual-function device. It is a sophisticated preamp covering 220 kHz to 30 MHz with over 20 dB gain. The preamp features dual-gate FET circuitry and accepts input from a long-wire, 300 ohm or random wire antennas. When an outdoor antenna is not available you can use the TPA as an indoor active antenna by extending the 30 inch (77 cm) built-in telescopic whip! Input from the external antenna and output to the receiver is RCA phono jack (coax cable to radio not suppled). The TPA runs on a standard 9V battery (not supplied) or with optional P-9T adapter.

**Ameco TPA** *Order #1512* **$74.95**
**Ameco P9T** *Order #0474* **$9.95**

RF systems

## AK-1



The optional **AK-1** Mounting Kit provides for the easy attachment of either the MTA, GMDSS or GMDSS-2 to a vertical or horizontal pole. This kit consists of a special bracket and 4 "U" bolts. Two "U" bolts attach to your mast or pole, and the other two "U" bolts attach to the bottom portion of the antenna.

**AK-1** *Order #2643* **$22.95**

RF systems

## DX10 Pro

The **RF Systems DX-10 Professional** is an omni directional active vertical receiving antenna covering 35 kHz to 35 MHz (20 kHz to 50 MHz with reduced specs). This unobtrusive, modest sized antenna can be used indoors or outdoors so you can mount it nearly anywhere. It employs a helical element that ensures excellent sensitivity to long distance radio signals coming in at low angles. The mixed polarization (90% vertical, 10% horizontal) reduces polarization fading. The DX-10 employs a class A, ultra linear wideband amplified with a power dissipation of 1.6 watts. It can simultaneously handle weak and very strong signals without generating spurious products. This antenna has a high 2nd order intercept point of no less than +70 dBm and a 3rd order intercept point of +40 dBm or better. The DX-10 has a leak path to ground to bleed off static and lighnting induced pulses. These protections only function when there is a proper earth ground. (The DX10 is not protected against a direct lightning strike and cannot serve as a lightning protector). Active antennas do not need to be mounted as high as possible as long as the antenna is outside the interference field around the house. The DX-10 is 52 inches high. Includes mast clamp (mast and coax are not included). Operates from 100-120 VAC 60 Hz with supplied DC30 AC adapter.

**DX-10 Pro** *Order #2868* **$319.95**

RF systems

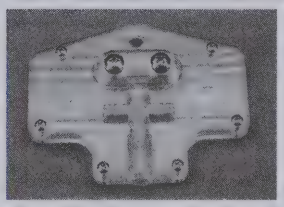
## MLB BALUN

The **RF Systems Magnetic Longwire Balun** makes it possible to efficiently use a coaxial lead-in cable with all forms of longwires, T-forms or other types of wire antennas, without the need for an antenna tuner. A very low loss magnetic transfer of energy from the antenna to the receiver is accomplished and static noise is reduced. Your coax is much less susceptible to interference. For receive only: 100 kHz - 40 MHz 50 ohm SO-239.

**MLB** *Order #1484* **$59.95**

TEN-TEC

## 3003 Acro-Bat



The UV resistant **Ten-tec Acro-Bat** can be used to suspend either a ladder line-fed or small gauge RG-58 or RG8X coax-fed wire antennas.

**3003** *Order #3720* **$9.95**

RF systems

## MT

The **RF Systems MT** is a nonamplified vertical receiving antenna covering 500 kHz to 30 MHz. This antenna is designed for listeners who wish to monitor long-wave, medium wave and shortwave, but do not have a large space for antenna. Unlike active antennas, the MT uses passive magnetic transfer technology to deliver a good signal with low noise and complete immunity to receiver overload from nearby transmitters.

The MT (magnetic transfer) receiving antenna is one of the few (if not the only) 7 foot antenna which is broadband in performance, yet does not require an antenna tuner. It does not need radials, nor does it suffer from intermodulation products. The signal level will be less than that achieved by using full-size active antennas. However, the earthed antenna element together with the Magnetic Transfer technology ensures a lower background noise level, and most communications receivers offer enough sensitivity to compensate.

The MT antenna consists of a weatherproof plastic pipe, 1.5 inches (32 mm) in diameter and 7 feet (2.1 m) long. The internal components of the antenna are filled with polyurethane foam, thereby making the antenna fully waterproof. The connector (SO-239) in the metal base is sealed with an artificial resin which stops any moisture entering the antenna. The antenna offers little wind-resistance, and the properties of the plastic ensure that the MT, GMDSS and GMDSS-2 are sturdy enough to withstand near hurricane force conditions.

**MT** *Order #3368* **$199.95**

RF systems

## GMDSS

The **RF Systems GMDSS** is designed in a similar fashion to the MTA, but has different frequency coverage. The GMDSS receives 100 kHz to 25 MHz. This version is optimized for Global Marine Distress & Safety System frequencies including the long wave NAVTEX frequencies. This antenna is the same physical size as the MTA.

**GMDSS** *Order #4118* **$219.95**

RF systems

## GMDSS-2

The **RF Systems GMDSS-2** is designed in a similar fashion to the MTA and GMDSS, but has different frequency coverage and is shorter. The GMDSS-2 receives 500 kHz to 18 MHz. Its is suggested for those who do not want such a tall antenna as the GMDSS or MTA. (Reception of 100-500 kHz is possible with reduced performance). The GMDSS-2 is only 4.1 feet (1.25 meters) high.

**GMDSS-2** *Order #2305* **$199.95**

ANTENNA SUPERMARKET

## EAVESDROPPER DIPOLES

The **Eavesdropper** trapped dipole antenna is designed specifically for the shortwave broadcast listener. The Eavesdropper utilizes eight weather-sealed antenna traps so that it performs as though it were a number of separate antennas. Each trap is hand assembled and individually resonated to its proper design frequency. The Eavesdropper is fed at the center with 72 ohm balanced feedline (100 feet provided). The impedance to the receiver is 50-75 ohms balanced. Installing the Eavesdropper is simple ... merely unwind the elements and feedline, and suspend between two supports with the nylon rope provided. No cutting, measuring or soldering is required! Although the Eavesdropper is weatherized for outdoor use, it may be strung in an attic. The antenna utilizes heavy 14 gauge wire for maximum strength. The overall length is less than 43 feet. The Eavesdropper covers these major shortwave bands:

60 Meters ( 4.75- 5.06 MHz.)
49 Meters ( 5.95- 6.20 MHz.)
41 Meters ( 7.10- 7.30 MHz.)
31 Meters ( 9.50- 9.78 MHz.)
25 Meters (11.70-11.98 MHz.)

19 Meters (15.10-15.45 MHz.)
16 Meters (17.70-17.90 MHz.)
13 Meters (21.45-21.75 MHz.)
11 Meters (25.60-26.10 MHz.)

Lead-in (supplied with twin-lead model **only**)

The Eavesdropper is covered by a one year limited factory warranty. Made in the U.S.A. The Eavesdropper-C is identical to the regular Eavesdropper except that it includes a coax fitting (SO-239) and it does NOT include a lead-in cable. The user must provide their own coax lead-in with PL259 plug (such as RG-8/X coax cables as shown on page 43). Both models ***include*** an integrated lightning arrestor.

**Eavesdropper Antenna With Arrestor** (Twinlead Type) *Order #0680* **$79.95**

**Eavesdropper-C Antenna With Arrestor** (Coax Type) *Order #2864* **$79.95**

## ANT-60

The **Sangean ANT-60** portable "roll-up" shortwave antenna will improve the reception of any portable worldband receiver. The antenna wire may be extended up to 23 feet. The ANT-60 terminates with a mini-plug (3.5 mm). If your receiver does not have a mini external antenna jack, an adapter plug is provided to clip the ANT-60 to your radio's whip.

**ANT-60** *Order #3184* **$12.95**

BUDWIG

## DIPOLE INSULATOR

Constructing a dipole is easy with the **HQ-1** center insulator. Attach each "arm" of your dipole to this device and then screw your PL-259 into the center! You get easy assembly, the best connection, the strongest support and the most weatherproof fit.

**Budwig HQ-1** *Order #1782* **$10.95**

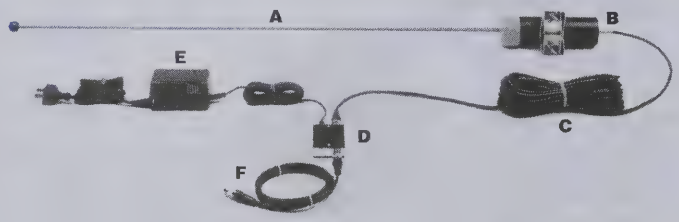
Matching end-insulators. (Package of two).

**Budwig HQ-2** *Order #3412* **$2.95**

dressler hochfrequenztechnik gmbh

## ARA40 ARA60S ARA100HDX

Dressler shortwave active antennas are designed for stationary and mobile receiving applications. You can capture the weakest signals with these German designed and German manufactured antennas.




The **ARA40** (shown above) is a great alternative for those who do not have the space for a traditional outside wire antenna. It is compact and unobtrusive. The ARA40 covers 40 kHz to 40 MHz. The output impedance of the antenna is always 50-75 ohms, independent of frequency. This allows efficient connection directly to the receiver without an additional antenna tuner. The ARA40 is designed with the portable shortwave receiver in mind. It does not produce so much gain as to overload the set. It also features an attenuator adjustment. The system starts with a 36 inch (95 cm) fiberglass whip antenna **(A)**. It feeds the amplifier module **(B)**. The amp module is connected to 40 feet (12 m) of RG58 coax **(C)**. This is connected to the supplied small interface power supply module via a BNC plug **(D)**. This module accepts 12 VDC to feed the amplifier. A 120 VAC power supply is thoughtfully provided **(E)**. Dressler also includes a coaxial jumper from the interface module to your receiver (BNC to PL-259) **(F)**. The ARA 40 clamps on to a standard 1.25-1.5 inch mast (not supplied). The overall length is 45" (115 cm).

The **ARA60** is designed in a similar fashion and looks like the ARA40. However its coverage is 40 kHz to 60 MHz. Additionally it has a higher gain for use with table top communications receivers.

The **ARA100HDX** covers 40 kHz to 40 MHz and is designed for the interception of weak signals even in the presence of strong broadcast station signals.

| | | | |
|---|---|---|---|
| **Dressler ARA40** | 3 dB gain/+45 dBm 3rd Ord. | | Discontinued |
| **Dressler ARA60S** | 9-9.5 dB gain/+50 dBm 3rd Ord. | *Order #4062* | **$349.95** |
| **Dressler ARA100HDX** | 11-12 dB gain/+55 dBm 3rd Ord. | *Order #4063* | **$549.95** |

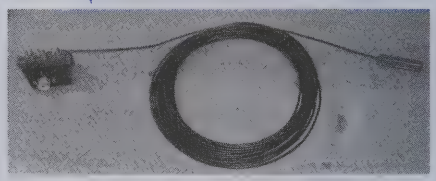
## Van Gorden END INSULATOR

The Van Gorden "dog-bone" end-insulators have high dielectric qualities, excellent strength and excellent weatherability. 2" long white.

**VG Dog-Bone** *Order #2379* **$ .89**

PAR ELECTRONICS

## EF-SWL



The **Par EF-SWL** is an end-fed short wave antenna optimally designed for 1-30 MHz reception. The radiator is 45 feet of genuine #14 gauge black polyethylene coated Flex-Weave wire (168 strands of #36 gauge woven copper). This material is very strong yet can easily be coiled like a rope for portable work. The UV resistant matchbox houses a wideband 9:1 transformer wound on a binocular core. Unlike other transformers, external stainless studs on the matchbox allow the user to configure the primary and secondary grounds for best noise reduction at their particular location. Output is via a silver/teflon SO239 UHF connector. The radiator also attaches via a stainless stud allowing it to be removed, or replaced with a different length radiator for experimental purposes.

**Par EF-SWL** *Order #2205* **$59.95**

COAX-SEAL

Use **Coax-Seal®** to protect any outdoor connection or connector. Coax-Seal is superior to electrical tape or vinyl sealant for moisture protection. One box, 60" x ½", will protect 9 connectors.

**Coax-Seal** *Order #1194* **$2.99**

# McKay Dymek

## DA-100E
## DA-100EM

The **McKay Dymek DA-100E** is a premium quality, general coverage active antenna. It provides excellent performance from 500 kHz to 30 MHz. The DA-100E system consists of an outdoor preamp with 4 foot 8 inch telescopic element, 50 foot of RG-58/U coax lead-in and control box. The DA-100E can be run from 110-120 or 12 VDC (2.5 mm jack). A 110VAC wall-type power supply is provided. An optional 110/220 VAC adapter is available for international use (*Order #3217* $24.95). Output impedance is selectable at 50, 100 or 500 ohms. A three position attenuator is also featured (0, 10 and 20 dB). The output jack to the receiver is an RCA phono jack. Please see page 43 for optional cable *Order #3043* (3 foot PL-259 to RCA).

**McKay Dymek DA-100E** *Order #0328* **$179.95**

The model **DA-100EM** is also available. It is designed for **marine** use. It utilizes a four foot, one piece fiberglass element in place of the telescopic metal whip on the regular version. Both versions carry a ninety day limited warranty.

**McKay Dymek DA-100EM** *Order #0376* **$199.95**

# ApexRadio

## 303WA

The **Apex Radio 303WA** is a quality passive receiving antenna (not for transmit) providing coverage from 30 kHz to 30 MHz. The antenna is designed for areas where space is a problem or when an unobtrusive installation is essential. The small size and relatively light-weight design is ideal for installation in a confined space such as apartment balcony. Since the 303WA is passive it provides superior low noise performance, free of cross and inter-modulations. The 303WA has a "U" bolt metal fitting that will require a short stub mast (not supplied). The mast diameter can be 0.4 to 1.9 inches (10-50mm). The antenna has a total height of 6 feet (1.80m). It comes with a preassembled 30 foot (10m) length of cable with a PL259 plug to connect to the antenna base and a BNC plug for your radio.

**303WA** *Order #0981* **$119.95**

## MFJ-1020C

The **MFJ-1020C** indoor active antenna offers good performance from an very compact package. This antenna system can be set directly on your desk and covers 300 kHz to 30 MHz in five bands. With built-in 20 inch (50 cm) telescopic antenna. An auxiliary antenna jack is provided. When it is used the MFJ-1020C functions as a preselector. Front controls include gain, band select, tune and On/Bypass. A red LED indicates power ON. The input jack and output jack are both SO-239 type (to accept PL259). Black metal case 6.4x2.5x3.3 inches. Requires a 9 volt battery or a 12 VDC power supply such as the MFJ-1312D.

**MFJ-1020C** *Order #1413* **$79.95**
**MFJ-1312D** *Order #2433* **$15.95**

## MFJ-1024

The **MFJ-1024** is a sensitive outdoor active antenna covering 50 kHz to 30 MHz. The outdoor unit consists of a 54" telescopic whip & amplifier module (3 x 4 x 4 inches). It is connected to the indoor control unit (6 x 2 x 5 inches) by a supplied 50 foot RG-58 coaxial cable. The control unit features a 20 dB attenuator and a gain control to prevent receiver overload. A built-in receiver switch selects between two receivers and an antenna switch selects an auxiliary antenna. A red LED indicates power-on. The auxiliary input and output jacks are RCA phono type. Requires 12 VDC power supply such as the MFJ-1312D.

**MFJ-1024** *Order #1132* **$134.95**
**MFJ-1312D** *Order #2433* **$15.95**

# KAITO ELECTRONICS INC.

## KA31

The **Kaito KA31** is an active shortwave, wire loop antenna that covers 3.9 to 22 MHz. The KA31 has dual outputs. If your portable shortwave radio has an 1/8 inch mini antenna jack you can plug this antenna directly in. For shortwave radios without an antenna jack, you also get simple clips for direct connection the radio's telescopic whip antenna. The control box has an LED to remind you when the antenna is turned on. There is a Tuning Knob on the control box that should be adjusted as you change frequency. This antenna is designed for indoor use only and requires two AAA cells (not provided).

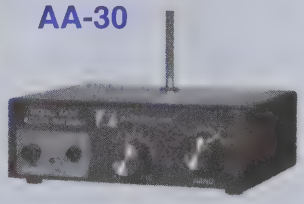
**Kaito KA31** *Order #1453* **$34.95**

## MFJ-1022

The compact **MFJ-1022** wideband indoor active antenna boasts coverage from 300 kHz to 200 MHz. It includes detachable 20 inch antenna. The output jack is an SO-239. A red LED is on the front panel to remind you that the antenna is on. This device requires a 9 volt battery (not supplied) or a 9-18 VDC external power supply, such as the MFJ-1312D.

**MFJ-1022** *Order #3109* **$54.95**
**MFJ-1312D** *Order #2433* **$15.95**

## AA-30



The **Palstar AA-30** indoor active antenna covers from 300 kHz to 30 MHz. There is a bypass switch if you wish to use this device as an antenna tuner with an external antenna. Tuned input reduces interferences and noise. Adjustments for gain, peak and band selection. SO-239 jacks for input and output. Requires a 9 volt battery or external 12 VDC power supply. 1.75 x 5.5 x 5 inches 1 Lb.

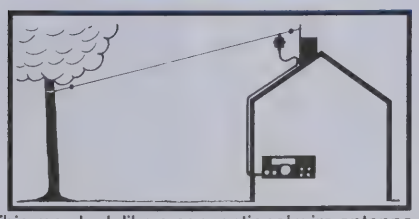
**Palstar AA-30** *Order #1492* **$99.95**

## SPECIAL NOTE

Wideband antennas that receive shortwave *and* scanner (VHF/UHF) frequencies are on page 49. If you want to wish to connect *both* a shortwave antenna and a VHF/UHF antenna to your wideband receiver please see the RF Systems DPX-30 on page 37.

## RF systems

### MLB-MK1/MK2



This may look like a conventional wire antenna kit at first glance, but it is much more. It consists of a heavy duty 41 foot wire, nylon rope and a quality insulator. At the feed-line end the antenna is terminated with the *RF systems'* patented Magnetic Longwire Balun. This balun permits an exceptionally low loss transference of antenna energy to your coax feed line. The result is significantly reduced static noise on long, medium wave and the tropical shortwave bands (60 & 90 meters). We have tested this antenna at Universal and we are impressed. It is for *receive only* covering 0.1 - 40 MHz. Requires 50 ohm lead-in cable not supplied (except MK3 & MK4 include 49 foot coax).

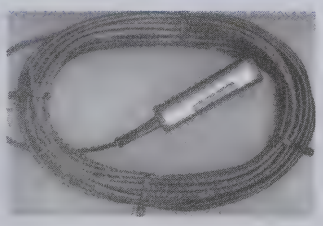
**MLB-MK1** *Order #1465* **$89.95**

66 ft. version (.1-30 MHz) for improved LW & MW.
**MLB-MK2** *Order #0883* **$99.95**

The MK3 is a stainless steel version of the MK1.
**MLB-MK3** *Order #4067* **$139.95**

The MK4 is a stainless steel version of the MK2.
**MLB-MK4** *Order #4068* **$149.95**

### MLB MARINE BALUN KIT



The **RF Systems MLB Marine** balun kit is designed to attach to an isolated stay or length of wire (18 to 90 feet) on a sailboat. The balun system consists of a 3.5" inch stainless steel cylinder attached to 45 ft of RG-58 coax cable to PL259 (cable may be shortened) This will result in an efficient, self matching antenna system for receive only in the range of 100 kHz to 30 MHz. The MLB Marine is completely waterproof. Please ask for a free specification sheet.

**MLB Marine** *Order #1511* **$99.95**

### EMF

**RF Systems' EMF** Electro-Magnetic Field passive wire antenna is complete and ready to go covering .1-30 MHz. Only 16 ft long and with 16 feet (5 m) of coax and PL-259. Made in Holland.

**EMF** *Order #0743* **$99.95**

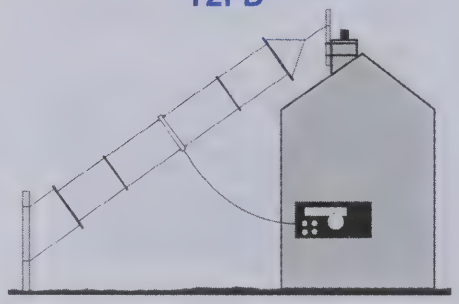
## RF systems

### DX ONE PRO II

The **RF Systems DX-One Pro II** is an omni directional active vertical antenna covering 20 kHz to 60 MHz. Has outputs for two receivers and ON-OFF MW suppression. This professional grade antenna is popular with government, diplomatic and military users worldwide. The control box unit features a step attenuator (+6 dB to -40 dB). It also has a switchable medium wave suppression feature which suppress signals from 540-1640 kHz by up to 40 dB. User must supply coax between antenna and control box. 47 inches (1.2 m) high. 110-130 VAC 50-60Hz.

**DX One Pro II** *Order #1246* **$669.95**

### T2FD



The **RF systems T2FD** tilted terminated folded dipole covers 3 to 35 MHz with only 45 feet of length. It is designed to provide much lower background noise than similar antennas. This passive antenna is assembled and ready to install. The T2FD has an as SO-239 jack to accept a PL-259 plug. The lead-in is not provided.

**T2FD** *Order #0562* **$249.95**

### MINI-WINDOM

**RF Systems Mini-Windom** is a low cost passive broadband wire receiving antenna that can be used indoors or outdoors. It receives in an omnidirectional fashion from .5 to 30 MHz. It uses magnetic transfer technology to reduce interference from computers and other man-made noise sources. Only 16 feet (5 m) long and with 16 feet (5 m) of coax and PL-259. Made in Holland.

**Mini-Windom** *Order #3575* **$84.95**

## RADIOMASTER

### P-30

The **RadioMaster P-30** is an unobtrusive 15 foot passive wideband, indoor/outdoor long wave, medium wave, shortwave wire antenna. It features a built-in matching transformer that ensures 50 ohm impedance so no antenna tuner is required. This omni-directional antenna is very low noise. The P-30 features a 15 foot RG-174 coaxial lead-in that is part of the antenna system. It terminates in a PL-259. This antenna and lead-in are completely preassembled. A short length of white nylon cord is supplied if needed for stringing.

**Radiom. P-30** *Order #1331* **$49.95**

### A-50

The **Radiomaster A-50** is a weatherproof indoor/outdoor omnidirectional active receiving antenna that covers 30 kHz to 50 MHz with up to 10 dB of gain. You get complete uninterrupted coverage of longwave, medium wave, shortwave and VHF to 50 MHz. The high +25 dBm 3rd order intercept point prevents overload and intermodulation and makes this antenna compatible with both portables and table top radios. The antenna features a 3.8 foot (1.1 m) stainless steel vertical element. The A-50 control box requires 12-15 VDC at 150 ma. A DC power cord and 33 feet (10 m) of coax lead in to PL-259 plug and U bolts for standard mast mounting are included.

**Radiom. A-50** *Order #1547* **$169.95**

### A-108

The compact **Radiomaster A-108** weatherproof indoor/outdoor active antenna covers .03-108 MHz with up to 10 dB of gain. You get complete uninterrupted coverage of longwave, medium wave, shortwave and VHF to 108 MHz. This 3.8 foot stainless steel vertical antenna features adjustable gain. The control box requires 12 VDC. Includes 33 feet of coax lead in to BNC. Radiomaster products are made in Holland.

**Radiom. A-108** *Order #1513* **$199.95**

## RF systems

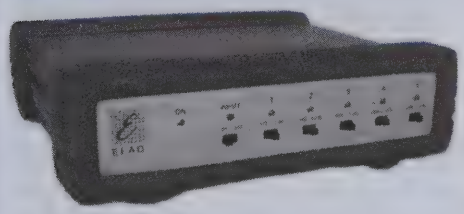
### AA-1

The **RF Systems AA-1** antenna adapter makes it possible to connect an outdoor antenna to every portable, including those that only have a whip antenna. The AA-1 is a special wideband impedance matching transformer with completely separated antenna and receiver circuits. The frequency range is 100 kHz to 30 MHz. The signal strength improvement with respect to direct connection of a piece of wire to the antenna can be as high as ten times. The signals are transferred by a magnetic field which reduces static and man-made noise. The AA-1 has an SO-239 jack at one end (accepts a standard PL-259). Plug in your external antenna here. The output is to an alligator (crocodile) clip and a special plug that plugs into the earphone jack of the portable (this will not disengage the receiver's audio). On the other side of the AA-1 is a signal level adjustment knob (0 db to -50 dB). Turn the knob fully clockwise for maximum signal level. Turn the knob counter-clockwise to reduce overload if needed. Made in Holland.

**AA-1** *Order #0902* **$59.95**

## ELAD

### ASA15

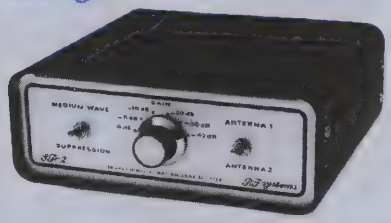


The **Elad ASA15** distribution splitter and amplifier permits using up to five receivers from one antenna with minimal signal loss and with high isolation. The ASA15 handles signals from 9 kHz to 30 MHz (usable range is 9 kHz to 70 MHz). The ASA15 utilizes six SO-239 jacks (1 input and 5 output). Click here to view rear panel. The ASA15 features a master 15 dB input attenuator. Additionally, 12 dB of amplification can be independently selected to each of the five output jacks via switches on the front panel. Power plug only included. Requires 12 VDC (11-16 VDC) at 300 ma. (see optional MFJ-1312D). (The ASA15 cannot be used for transceive applications). Aluminum enclosure with plastic cover 200x50x200mm 800 g. Made in Italy.

**ASA15** *Order #2160* **$289.95**
**MFJ-1312D** *Order #2433* **$15.95**

## RF systems

### SP-2



A growing number of DX'ers have two receivers, and one or two antennas. The **RF Systems SP-2** is a two-way antenna splitter for 50 kHz to 50 MHz. Unlike other units, the SP-2 offers a high degree of isolation between the two receivers (> 30 dB) to ensure independent tuning of each radio without interaction. A constant impedance attenuator offers six steps: 0, -6, -10, -20, -30 and -40 dB. This allows you to reduce the level of strong signals which can cause overloading, often allowing weak stations to be heard above the background noise. A selectable MW suppression filter is built-in. This is useful if you are troubled on shortwave by a nearby AM station. The unused antenna is grounded. Utilizes SO-239 jacks for both inputs and both outputs. Made in Holland.

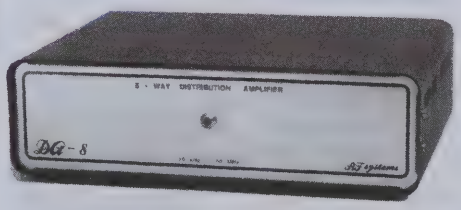
**SP-2** *Order #2564* **$199.95**

### DA-4

The **RF Systems DA-4** distribution amplifier permits using up to four receivers from one antenna without signal loss and with full isolation. For signals from 10 kHz to 30 MHz. Utilizes SO-239 jacks. Requires 100-130 VAC 50/60 Hz.

**DA-4** *Order #0601* **$339.95**

### DA-8



The **RF Systems DA-8** distribution amplifier permits using up to eight receivers from one antenna without signal loss and with full isolation. The DA-8 handles signals from 10 kHz to 30 MHz (usable range is 5 kHz to 50 MHz). The DA-8 utilizes nine SO-239 jacks (1 input and 8 output). Insertion Gain: ±2 dB (all ports terminated), Output to Input Isolation: >65 dB, Isolation Between Outputs: >22 dB, Maximum Input/Output Level: 10 volts peak-peak into 50 ohms, Noise Figure: typically >8 dB at 30 MHz, Dynamic Range: >125 dB, Required Volatage: 100-130 VAC 50/60 Hz. Six month manufacturer's limited warranty. Made in Holland.

**DA-8** *Order #3577* **$699.95**

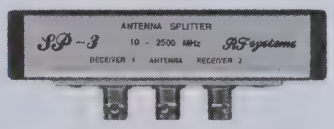
## RF systems

### SP-1

The **SP-1** allows two shortwave receivers to be connected to one antenna (or two antennas to one recevier) without interaction and with minimal signal loss. Operational from 50 kHz to 30 MHz. Uses three SO-239 jacks. Passive.

**SP-1** *Order #1420* **$89.95**

### SP-3



The **SP-3** allows two scanners to be connected to one antenna without interaction and with minimal signal loss. Operational from 10 to 2500 MHz. Uses three BNC jacks. Passive. Made in Holland.

**SP-3S** *Order #0973* **$99.95**

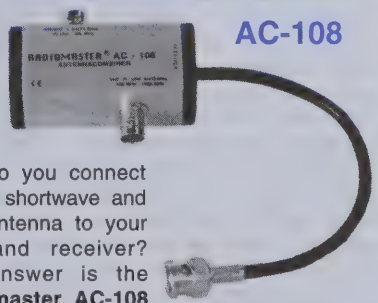
### DPX-30

The **RF Systems DPX-30** is designed to work with today's wide band scanners covering the range of 100 kHz to 2000 MHz. Most such wideband receivers only have one antenna input jack (usually a BNC). Yet finding a single antenna to cover this immense range is almost impossible. The DPX-30 makes it possible to combine the the signals of a separate shortwave and separate VHF/UHF antenna to the single antenna input of the receiver. It accomplishes this without mutual interference and prevents overload of the wideband radio. The input jack for 0 to 30 MHz is an SO-239 (accepts a PL-259 plug). The input for 30 to 2000 MHz is a BNC. The single output jumper is BNC male 0-2000 MHz. This device is ultra low-loss (typically less than 0.3 dB). Greater than 50 dB isolation between antennas is achieved. There are no dead zones or blocked frequencies. This is a passive device. No power is required. Made in Holland.

**DPX-30** *Order #3578* **$99.95**

## RADIOMASTER

### AC-108

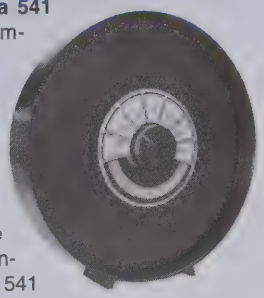


How do you connect both a shortwave and VHF antenna to your wideband receiver? The answer is the **Radiomaster AC-108** antenna combiner. Two BNC inputs to one male BNC plug on a short coax jumper.

**AC-108** *Order #1497* **$69.95**

# Select-A-Tenna

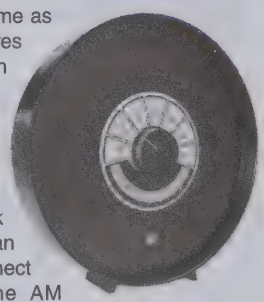
## 541



The **Select-A-Tenna 541** is your ticket to improved AM Band performance on your portable radio. It produces a signal gain of +30 dB when used with most AM radio receivers which have internal ferrite rod antennas. The Model 541 is a passive device that requires no wires, batteries or plugs. It works by simply placing it next to your radio and tuning the knob to the same station frequency as your radio. The Select-A-Tenna functions by concentrating the radio station signal energy in the near proximity of the 541. If your radio has an internal antenna and is placed in that same near proximity, it shares the same signal concentration and gain improvement. The net effect is to make very weak signals up to +30 dB stronger.

**541** *Order #4316* **$49.95**

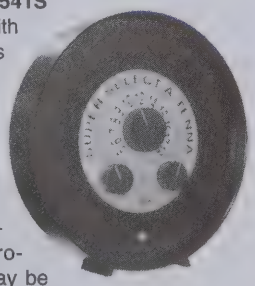
## 541M



The **541M** is the same as the 541, but it features a 3.5 mm mini jack on the front panel that allows the unit to be connected to an outside long wire and ground. Or alternately, this jack may be used as an output jack to connect the antenna to the AM radio's antenna input terminal (for a radio that does not have a built-in Ferrite antenna). A short bare-wire cable to 3.5 mm mini plug is supplied.

**541M** *Order #4317* **$59.95**

## 541S

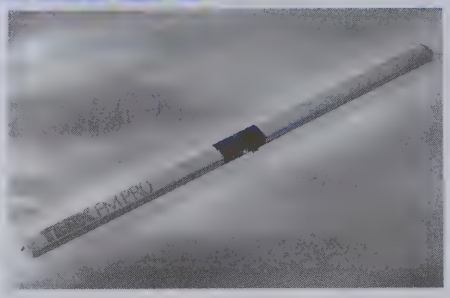


The **Select-A-Tenna 541S** is an active device with additional controls and a regenerative variable gain +10 dB amplifier. This is added to the intrinsic +30 dB for a total gain of +40 dB. Coarse and Fine Tuning controls are provided. The 541S may be used in near proximity just like the 541 and 541M or direct wired. It may also be used with the supplied ferrite probe. This provides the capability to not only drive the 6 foot (1.8 m) coaxial cable and probe, which are included, but the cable may be extended to as much as 26 feet using extension cables readily available locally. This is very useful for remotely locating the 541S away from radio noise sources or into better signal locations.

**541S** *Order #4318* **$179.95**

# TERK

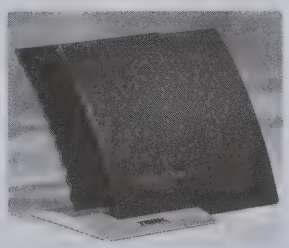
## FM Pro



The **FM Pro** is Terk's best antenna for long range FM reception. The half-wavelength folded dipole design and built-in dual-mode amplifier provide clear and powerful reception of both distant and close FM stations. A slim-profile design allows easy mounting under a windowsill, on a rooftop, on a wall or in any number of locations inside or outside a home. The dual-mode amplifier allows 11 dB of amplification or bypass mode for optimum reception of strong signals. Has "F" connector for cable (not included). With AC adapter and matching transformer. 57 x 2.5 x 1.25 inches.

**FM Pro** *Order #3825* **$99.95**

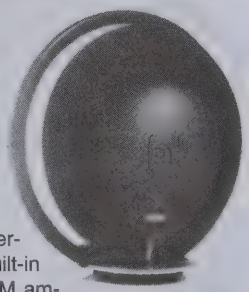
## Q



The **Q** is Terk's premium amplified indoor AM/FM antenna. The Q features Pin-Dot Pre-Tuning that zeroes in on even hard-to-get stations by tuning the antenna to the station's frequency. The amplifier can be precisely adjusted via LED display for optimum signal strength for each station. It is easy to install and use and its compact, stylish high-tech design complements any home entertainment installation. With AC adapter and antenna matching transformers.

**Q** *Order #3569* **$69.95**

## PI-B



The **Terk PI-B** AM/FM improves both short and long-range radio reception. The compact PI is big in performance, The exclusive Gamma-Loop® technology reduces FM interference and it has a built-in high-gain, low-noise FM amplifier that can be adjusted to strengthen reception of weaker or distant stations, without over-boosting stronger or closer stations. The FM reception pattern is omnidirectional. The non-skid base keeps the antenna in place during adjustment. Output to AM is twinlead wire and FM is in the form of a push-on "F" connector. A matching transformer is also supplied if your radio has FM terminals. Includes AC adapter.

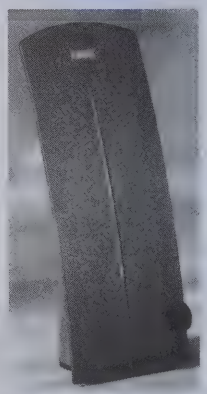
**PI-B** *Order #1718* **$44.95**

## ADVANTAGE

The **Terk Advantage** is a passive, fully adjustable indoor antenna for the AM broadcast band. It uses a pre-tuning system that adjusts antenna to specific frequency for best reception. It covers 540 to 1700 kHz. It tunes stations that other antennas do not and tunes out static. The Advantage may be placed right next to or on top of the AM radio. This inductive coupling makes it easy to use with most portables. For an even higher level of performance the unit may be connected to the receiver or tuner (if it has AM antenna terminals). A six foot 300 ohm cable is supplied.

**Advantage** *Order #2774* **$39.95**

## EDGE



The **Terk FM Edge** is a powered FM antenna designed for indoor use. Its compact size and contemporary styling lets it fit in anywhere. A Gain knob lets you adjust the amplification from 0 to +36 dB. The back panel of the antenna features a 3.5mm input jack for the supplied AC adapter. There is a wired-in lead in cable that will plug into either the 70 ohm or 300 ohm supplied antenna matching transformers. 7.5 x 2.5 x 1.25 inches.

**EDGE** *Order #2221* **$37.95**

## TOWER

The **Terk Tower** can function as an omnidirectional antenna for great reception from all directions (placed vertically), *or* as a directional antenna (placed horizontally) to zero in on distant or weak stations. It features a built-in low-noise amplifier which can be adjusted from 0dB to +25dB for best reception of weaker or stronger stations. Exclusive Air Coil technology isolates AM and FM antenna elements for increased selectivity with greatly reduced static and noise. With AC adapter and antenna matching transformers.

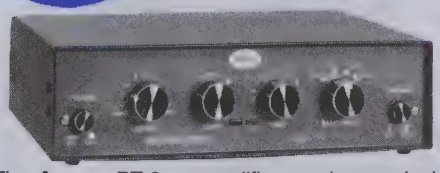
**TOWER** *Order #3979* **$23.95**

## RF systems WA-50

The **RF Systems WA-50** is a high quality broadband amplifier for LW, MW and SW frequencies with a range of 50 kHz to 50 MHz. The gain is 10 dB (3X), sufficient to compensate for low efficiency antennas, but not high enough to create serious overloading problems in most receivers. The second order intercept point of +60 dBm and the 3rd order intercept point of +40 dBm are higher than those of most modern receivers. The WA-50 is equipped with a PL-259 output and a standard 50 ohm SO-239 input. The WA-50 input has a galvanic path to ground which allows static charges to flow harmlessly to ground. Requires 12 VDC. Made in Holland.

**WA-50 12VDC** *Order #0980* **$199.95**

## AMECO PT-3

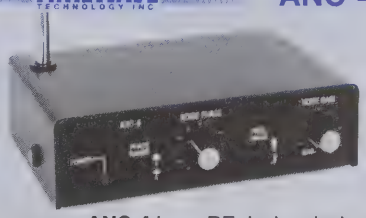


The **Ameco PT-3** preamplifier employs a dual-gate FET providing a low noise figure, thereby improving the weak signal performance of most receivers. Image and spurious rejection are greatly improved. Gain is in excess of 20 dB. Covers 1.6 to 56 MHz. The PT-3 can be used with a receiver or a transceiver (under 350 watts). The input and output are 50 ohm SO-239 jacks to match most antennas and radios. Operates on 12 VDC or with optional P12T AC adapter.

**PT-3** *Order #2158* **$134.95**

**P12T** *Order #0167* **$9.95**

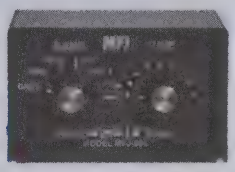
## TIMEWAVE TECHNOLOGY INC ANC-4



The **Timewave ANC-4** is an RF device designed to provide cancellation of locally generated noise from signals received by a primary antenna. The unit is employed right at the antenna connector of the receiver to cancel noise from power lines, computers, TVs or nearby equipment. Controls allow adjustment of both phase and magnitude, providing deep cancellation of the offending noise. May also be used with transceivers under 150 watts. Range: .1 - 80 MHz. Uses SO-239 for I/O. Requires 12 VDC (or optional AC-1 power supply *#3337* $15.95). 1.7 x 6 x 4.3 inches.

**ANC-4** *Order #0094* **$199.95**

## MFJ-956



This LW, MW and SW preselector tuner lets you boost your favorite stations while rejecting images, intermod and other phantom signals on your shortwave receiver. Operates from .15 to 30 MHz. Has bypass and ground positions. Accepts PL-259 connectors. 3x2x4 inches. Now in black only.

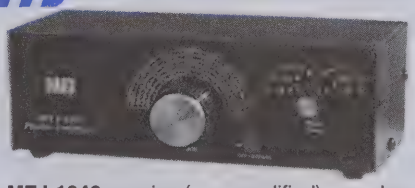
**MFJ-956** *Order #2964* **$54.95**

## MFJ-16010

This random wire tuner will match any wire antenna to any receiver or HF transceiver (160-10 Meters up to 200W). This device will match the impedance of your radio to the impedance of the antenna. Standard SO-239 jacks are provided for input and output. Only 3 x 2 x 4" (51x76x102mm).

**MFJ-16010** *Order #1329* **$54.95**

## MFJ-1046



The **MFJ-1046** passive (non-amplified) preselector covers 1.6 to 33 MHz in six bands. A bypass button is featured for times when you do not wish to use the preselector function. This device is for receive only (no transmit). SO-239 jacks are used for input and output. Black metal construction. A coaxial jumper cable to your receiver will be required. 7.5x2.5x3.25". One year limited warranty.

**MFJ-1046** *Order #3736* **$99.95**

## MFJ-1040C

This preselector boosts signals from 1 - 54 MHz. It utilizes dual gate MOSFET, bipolar transistors for low noise and high gain. Push-button switches provide for two receivers, two antennas, 20 dB attenuator and ON/BYPASS. Controls for Delay, Gain, Band and Tune. It has a relay that automatically bypasses the amplifier when transmitting (up to 125W). SO-239 rear panel jacks provide for the use of PL-259 connectors. Size: 6" x 2" x 6". Requires 9-12 VDC (see MFJ-1312D).

**MFJ-1040C** *Order #4110* **$99.95**

**MFJ-1312D** *Order #2433* **$15.95**

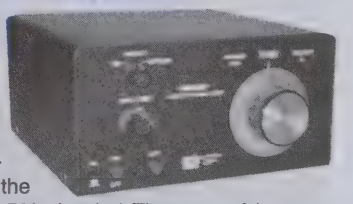
## MFJ-959C

The **MFJ-959C** receive-only antenna tuner covers 1.8 to 30 MHz and features a low noise 20 dB preamp to bring out weak stations and matches the antenna to the receiver for maximum signal strength. It accommodates up to two antennas and two receivers. You can select tuner, tuner with preamp, tuner with 20 dB attenuator or bypass. Rear panel jacks provide for the use of PL-259 connectors. Size: 6.5 x 2.5 x 4". Requires 9-18 VDC power supply (see MFJ-1312D).

**MFJ-959C** *Order #2574* **$99.95**

**MFJ-1312D** *Order #2433* **$15.95**

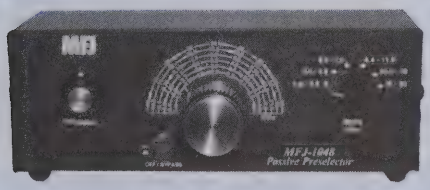
## MW550P



The **Palstar MW550P** is a tuner, preselector and amplifier designed with the medium wave DXer in mind. The range of the tuner section is specified from 500 kHz to 1800 kHz (but tunes to 2800 kHz). A 6:1 vernier allows precise adjustment. The tuner and Jfet amp provides 4 to 12 dB of gain. The bandwidth is adjustable to an incredibly narrow 2 to 6 kHz with input coupling control and narrow-wide switching. A bypass switch is provided. The rear panel features an SO239 input for a standard 50 ohm coaxial feedline and a terminal for longwire/Beverage antenna. Output is an SO239 jack. An earth ground is required for proper operation. Size: 8.25x4.25x9 inches 6 Lbs. An AC wall power supply providing 12 VDC is included.

**MW550P** *Order #1678* **$274.95**

## MFJ-1048




The **MFJ-1048** passive (non-amplified) preselector covers 1.6 to 33 MHz in six bands. Unlike the MFJ-1046, the MFJ-1048 can be used for receive and transmit. An RF sense transmit/receiver switch with adjustable time delay automatically bypasses your MFJ-1048 when you transmit. It also has a PTT line. SO-239 jacks are used for input and output. Black metal construction. A coaxial jumper cable to your radio will be required. 7.5 x 2.5 x 3.25 inches.

**MFJ-1048** *Order #3749* **$114.95**

Preassembled cables to connect tuners and preamps are listed on page 43 of this catalog. The most commonly used cables are *#2579* and *#3043*.

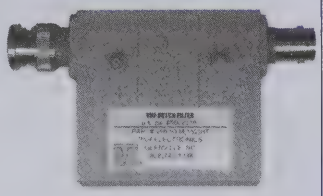
PAR ELECTRONICS

## VHF-FM

The **Par VHF-FM** is designed to help scanner listeners cope with interference from FM broadcast stations (88-108 MHz). The Par VHF-FM is a 3 pole notch filter designed to eliminate FM broadcast interference especially on the VHF air and VHF low bands. There is an adjustment at the base of the filter that determines the frequency of the center notch. It is factory preset to 98 MHz and normally does not require user adjustment. The housing has a female BNC for input and a male BNC for output for easy connection to most scanners. The bandpass is 0 to 1000 MHz with a notch band from 88 to 108 MHz. Minimum stopband and attenuation is 24 dB and maximum stopband attenuation is 45 dB.

**VHF-FM** *Order #0098* **$66.95**

## VHFSYM152HT

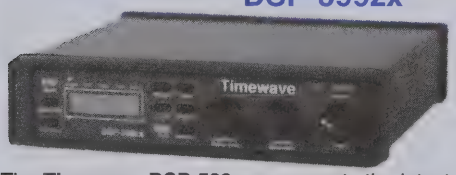


The **Par VHF-SYM152HT** is a scanner intermod filter that has a notch band of 152 to 153 MHz and a useful passband of 0 to 1 GHz. The notch band covers the offensive pagers in this range. The notch depth is up to >38 dB. Typically, Par symmetrical filters have a 3dB bandwidth of ±1.5% or roughly 2.25 MHz for VHF HI filters. Designed for scanner use. BNC female input and BNC male output. 4 x 2 x 0.75 inches.

**VHFSYM152HT** *Order #1813* **$69.95**

TIMEWAVE TECHNOLOGY INC.

## DSP-599zx




The **Timewave DSP-599zx** represents the latest generation of DSP filter, incorporating the newest high speed CPU. The new LCD display, push buttons and Visible Memory let you see the exact settings of the filters. The DSP-599zx works in all modes. It is a dream for the non-voice modes. Data modes supported in the filter are RTTY, AMTOR, PACTOR, G-TOR, HF Packet, SSTV, WeFax, SITOR and Clover. An added benefit of the powerful DSP processor and LCD display is a special "Test Instrument" mode. Functions such as audio sine wave generator, audio millivoltmeter (20 Hz-10 kHz) and CTCSS encoder/decoder are supported. Requires 12-16 VDC 1A. 7.6 x 1.9 x 8.5" 2 Lbs.

**DSP-599zx** *Order #3630* **$419.95**

## INTERMOD FILTERS

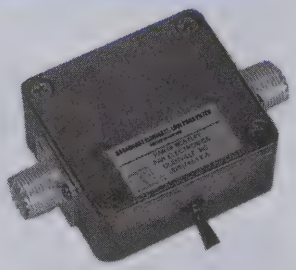
The good news is that most new amateur 2 Meter transceivers have wideband receive. The bad news is that they are very susceptible to intermod from 152-154 MHz pagers. The **Par VHFDN152** notches out these frequencies while introducing only 0.3 dB insertion loss in the 2M band. May be left in-line for 2M/440 rigs too. SO-239 in/out.

**VHFDN152** *Order #1898* **$66.95**

This version is for HTs uses M/F BNCs.

**VHFDN152HT** *Order #3491* **$64.95**

## BCST-HPF & BCST-LPF



The **Par BCST-HPF** is designed to help shortwave listeners cope with interference from AM stations. This 7 pole elliptic high pass filter passes 1.8 to 200 MHz and notches out 0-1.7 MHz. The housing has SO-239 jacks for input and output and also has a toggle type bypass switch. Made U.S.A.

**BCST-HPF** *Order #4426* **$58.95**

The **Par BCST-LPF** is designed to help long wave DXers cope with interference from nearby AM stations above 540 kHz. Stop band is 540 kHz to 300 MHz. The housing has SO-239 jacks for input and output and has a bypass switch.

**BCST-LPF** *Order #1143* **$58.95**

AOR

## ABF125

The **AOR ABF125** is a receive bandpass filter, designed for serious VHF airband listeners. The addition of this filter to the antenna's signal path provides additional selectivity which enables the receiver's circuitry to better cope with strong interfering signals that can leak into the 108-136 MHz VHF air band. The ABF125 provides additional selectivity to any receiver's front end by reducing unwanted strong signals from reaching the receiver's first mixer stage. Out-of-band attenuation is typically of 25 dB from 0.3 to 75 MHz and 20 dB from 190 to 400 MHz. A BNC female is fitted to the top of the ABF125 and a BNC male plug to the other end. The ABF125 is not an amplifier but the additional selectivity offered can significantly improve reception in many situations. You must remove the ABF125 from the antenna input when monitoring signals other than VHF airband.

**ABF125** *Order #0880* **$29.95**

MFJ

## MFJ-784B

The **MFJ-784B** tunable DSP audio filter can simultaneously eliminate heterodynes, reduce noise *and* reduce interference in nearly any mode. You get 5 tunable DSP filters, plus 10 programmable filters. The automatic notch zaps hets, adaptive noise reduction reduces fatigue and the highpass-lowpass and tunable bandpass filters give you effective tools to dig out the weak ones. Requires 10-16 VDC @500ma (MFJ-1312D). 9.5 x 2.5 x 6".

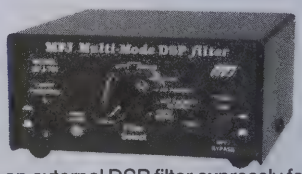
**MFJ-784B** *Order #3470* **$239.95**
**MFJ-1312D** *Order #2433* **$15.95**

## MFJ-752C

The **MFJ-752C** is a dual tunable filter that permits you to zero in on a SSB/CW signal and notch out interference at the same time. It can also be used for AM SWLing. Primary filter has tunable peak, notch, lowpass and highpass. Auxiliary filter has peak and notch. The filter is automatically bypassed when the unit is off. Speaker and phone jacks are provided. Requires 9-15 VDC @300 ma. Use MFJ-1312D power supply. 10 x 2 x 6".

**MFJ-752C** *Order #1124* **$99.95**
**MFJ-1312D** *Order #2433* **$15.95**

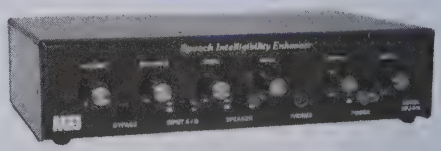
## MFJ-781




The **MFJ-781** is an external DSP filter expressly for TNC or multimode data controllers providing 100 incredibly sharp no-ring linear phase FIR filters.

**MFJ-781** *Order #3467* **$129.95**
**MFJ-1312D** *Order #2433* **$15.95**

## MFJ-616



The versatile **MFJ-616** DSP filter increases speech intelligibility. Eliminate hum, buzzes, poor frequency response, low power. Works with SSB, FM, AM -- any voice mode. The front panel has: Volume, Balance, 300 Hz, 600 Hz, 1200 Hz and 2400 Hz., Bypass, Input A/B, Speaker On/Off, Power and a ¼ inch stereo headphone jack. Back panel has RCA Input A and B. Requires 13.8VDC at 1.5A or optional MFJ-1316 .

**MFJ-616** *Order #2377* **$164.95**
**MFJ-1316** *Order #1469* **$21.95**

**NOTE:** Please see page 88 for speakers with audio filtration.

# DAIWA CS-201/G

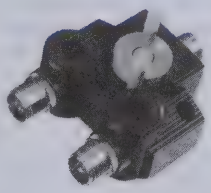
Daiwa switches utilize professionally engineered all metal cavity construction for maximum efficiency, high isolation and minimum resistance. Isolation is better than 50 dB at 300 MHz. Insertion loss <0.2 dB. The CS-201 is a two position switch that utilizes SO-239 connectors. Unused positions are grounded. 0 - 600 MHz 2.5 KW PEP 50 ohm.

**CS-201** *Order #1864* **$24.95**

As above but utilizes 'N' connectors 0-1300 MHz.

**CS-201G** *Order #2224* **$39.95**

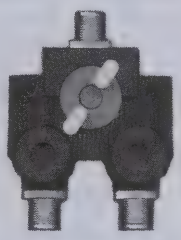
# DIAMOND CX-210A



The **Diamond CX-210A** is a very high quality two-position switch (SO-239) for 0-1000 MHz. Insertion loss is <.05 dB at DC-500 MHz and <.1 dB 500-1000 MHz. Maximum power rating is 1500 watts. 50 ohm.

**CX-210A** *Order #1636* **$44.95**

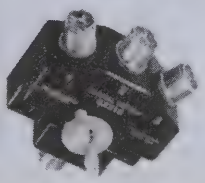
## CX-210N



The "N" version of the CX-210 switch is rated to 3000 MHz. with only <.1dB at 1000, .15dB at 2000 MHz.

**CX-210N** *Order #0605* **$69.95**

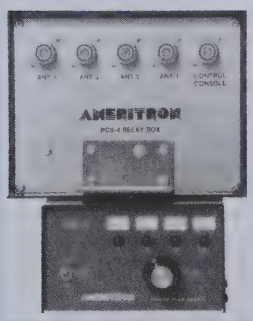
## CX-310A



The **Diamond CX-310A** is a low loss, three position coaxial switch rated to 800 MHz. It can handle up to 1500 watts at HF frequencies. Insertion loss 0-500 MHz is 0.10 dB and at 500-1000 MHz it is 0.15 dB. SO-239 jacks for input and output.

**CX-310A** *Order #2249* **$74.95**

# AMERITRON RCS4/8/10



Universal carries all three Ameritron remote coax antenna switches. The **RCS4** [shown] **RCS8** and **RCS10** switch 4, 5 and 8 antennas respectively. Some require a control cable (not supplied). Visit our website for details and pricing.

# ALPHA DELTA

## DELTA SWITCHES

Alpha Delta employs cast aluminum cavities to permit the switching of two or four antennas while maintaining a constant 50 ohm impedance. Silver-plated phosphor bronze micro strip construction ensures loss of less than 0.1 dB at 30 MHz with >60 dB of isolation (0.5 dB loss and 50 dB isolation at 450 MHz). The Delta switches are rated at 1500 watts and offer three levels of surge protection. In the *common* position the common is disconnected from all antennas and all antennas are connected to ground. These switches feature a built-in surge protector. A replaceable D-4 Arc-Plug cartridge will divert harmful surges to ground. (Note: The Delta switches reduce the hazard of lightning induced surges, but will not prevent fire or damage caused by a direct strike). The Delta 2B and Delta 4B switches feature SO-239 fittings (for PL-259s).

The **Delta-2BN** and **Delta-4BN** switches are the same except with 'N' jacks instead of SO-239s.

**Alpha Delta Delta-2B** Two Position Switch
*Order #4787* ..... **$54.95**

**Alpha Delta Delta-2BN** Two Position Switch
*Order #4788* ..... **$74.95**

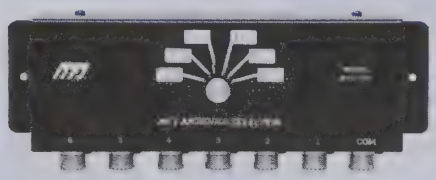
**Alpha Delta Delta-4B** Four Position Switch
*Order #4789* ..... **$84.95**

**Alpha Delta Delta-4BN** Four Position Switch
*Order #4790* ..... **$94.95**

**Alpha Delta D-4** Arc-Plug Replacement Pill
*Order #0854* ..... **$8.95**

# MFJ

## MFJ-1701



The **MFJ-1701** allows you to switch between six antennas without disconnecting a connector. It can be used for 52 to 75 ohm systems. It uses seven SO-239 connectors. All unused terminals are automatically grounded for static-lightning protection. With mounting holes for desk or wall. Can be used for transmitting up to 2000 watts SSB or 1000 watts CW. Black aluminum. 10 x 3 x 1.5".

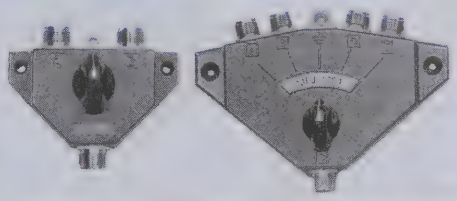
**MFJ-1701** *Order #1083* **$62.95**

## MFJ-1700C

If you have multiple antennas *and* multiple receivers, the **MFJ-1700C** is just for you! It can handle up to six receivers and six antennas. With mounting holes for desk or wall. May be used for transmitting up to 2000 watts single sideband or 1000 watts CW at 50 to 75 ohms. SO-239 jacks. Built-in surge protection. Black 4.5 x 7 x 3 inches.

**MFJ-1700C** *Order #0212* **$92.95**

## MFJ-1702C MFJ-1704



The **MFJ-1702C** two-position coax switch has a center ground position and the unused terminal is automatically grounded for static and RF protection. Handles up to 2.5 KW PEP 1 KW CW. 0-500 MHz. Now includes surge protection. 50 ohm. SO-239. Blue-green color.

**MFJ-1702C** *Order #2811* **$27.95**

As above but with "N" connectors (no surge prot.)

**MFJ-1702CN** *Order #1192* **$33.95**

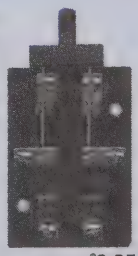
The **MFJ-1704** switch selects up to four antenna or center ground position. It also features static surge suppression with a replaceable arrestor. It handles up to 2.5 KW PEP 1 KW CW. 0-500 MHz. Isolation is rated from >60 dB at 30 MHz to >50 dB at 500 MHz. 50 ohm. SO-239. Blue color.

**MFJ-1704** *Order #0362* **$64.95**

As above, but with "N" type connectors.

**MFJ-1704N** *Order #2494* **$74.95**

# Philmore 30-9730



Remember these? The **Philmore 30-9730** DPDT knife switch is still a cheap and easy way to disconnect a wire receiving antenna from a radio. The terminal and contact material is nickel plated steel. The base is black ABS plastic. Current rating: 0.3 amps 50 VAC or 0.5 amps 6 VDC. The base is 2.4 x 1.7 inches.

**30-9730** *Order #1432* **$3.95**

▶ Since no single antenna works best on all frequencies, many listeners use more than one antenna. The antenna switch is a critical component of the listening system since it is switching very small current. A poorly designed or poorly constructed switch can introduce enough resistance to substantially attenuate the signal coming in from your antenna. Do not jeopardize your entire listening system with a poor antenna switch.

➤ See **LDG antenna switches** on page 74.

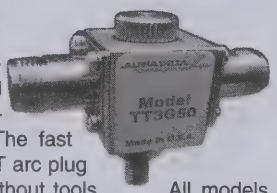
## ALPHA DELTA LT

Today's receivers utilize solid-state components and have very sensitive front ends. These radios are much more susceptible to lightning and static problems than their tube-type predecessors. Unlike the old "air-gap" lightning arrestors, the Transi-Trap utilizes a hermetically sealed gas filled cylinder which has very reliable, predictable and fast switching characteristics (less than 100 nanoseconds!). The Transi-Trap directs the discharged current to an isolated ground terminal versus the coaxial ground system and has a replaceable plug. The LT is for receive and transmit up to 200 watts under 30 MHz. The LT and other protectors must be connected to a proper earth ground.

**Transitrap LT** *Order #1502* **$29.95**

Replacement cartridge for the LT.
**Pill for LT** *Order #1503* **$16.95**

## ARR3G50N




The **Alpha Delta ATT3G50** series of coax surge protectors offer wideband capability with extremely low loss. The fast acting gas tube ATT arc plug can be replaced without tools. All models are completely weather proofed by the use of O-ring seals and all hardware is stainless steel. UL standard 497B listed. Made in America.

The **ATT3G50** "N" version, shown above, can be used from DC to 3 GHz with typical dB loss of only 0.1 dB @ 1 GHz and 0.2 dB at 2 GHz. It can be used for receive or for transmit (up to 200 watts).
**ATT3G50 (N)** *Order #4003* **$54.95**

The **ATT3G50U** version features UHF female jacks (SO-239's) and can be used receive or for transmit (up to 200 watts) from 0 to 500 MHz.
**ATT3G50U** *Order #4004* **$47.95**

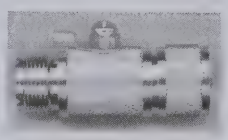
The **ATT3G50UHP** is a high power transmit version of the ATT3G50U and can handle up to 2 kW.
**ATT3G50UHP** *Order #4005* **$47.95**

The **ATT3G50HP** is a high power transmit version of the ATT3G50 (N) and can handle up to 2 kW.
**ATT3G50HP** *Order #4008* **$54.95**

Replacement cartridge for ATT3G50 & U.
**ATT** *Order #4006* **$9.95**

Replacement cartridge for ATT3G50HP & UHP.
**ATT-HP** *Order #4009* **$9.95**

## Opek A7516



The **Opek A7516** surge arrestor is not the *state-of-the-art* in radio protection. These *air gap* arrestors were OK for tube sets, but are not the best for today's solid-state rigs. However, if you are on a budget, this device is a whole lot better than nuthin! For receive and transmit up to 100W.
**A7516** *Order #4618* **$3.95**

## DEO RECEIVER GUARD

### RG2000U

### RG2000CTT

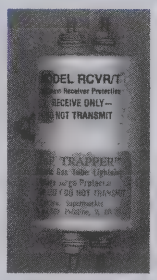
Lightning and static are not the only enemies of modern receivers! Sensitive receiver "front-ends" can also be damaged by nearby high power radio signals (RF). The ham across the street running 2000 watts into a beam antenna can generate enough RF in your antenna system to damage or desensitize your receiver. Other potential sources of high power RF are high powered CB operators, commercial radio and TV broadcasters and public service broadcasters. Hams who have separate receivers are also very susceptible to this problem (... ask our service tech!). Design Electronics Ohio has developed a series of diode-activated switching devices which will switch your antenna automatically to ground in the presence of a high-power RF field. The Receiver Guard 2000 series offers protection from high power RF through a very fast acting diode switching circuit with very low insertion loss. These devices do not change the performance of the set and do not offer lightning suppression (except CTT). Not for use with transceivers or transmitters! This device has a replaceable protection element and is covered by a one year limited factory warranty. (Note: Protection element not covered by warranty). Uses standard SO-239 connectors (mates with PL-259s). Made in U.S.A. **RG 2000U** *Order #1305* **$29.95**

Package of 3 replacement protection elements.
**DEO Fuse** *Order #0339* **$8.95**

## RECEIVER GUARD 2000CTT

The **Receiver Guard 2000 model CTT** combines the model "U" version with an Alpha Delta LT Transi-Trap device to offer ***both*** RF protection and lightning suppression. Shown above-right. This "combo" unit offers the maximum protection.
**RG 2000CTT** *Order #1303* **$59.95**

## ANTENNA SUPERMARKET ZAP TRAPPERS



The Antenna Super Market **Zap Trapper T** is your protection solution for twin-lead fed shortwave receiving antennas. Antenna Super Market suggests you connect a twin-lead jumper between the back of your radio and the Zap Trapper T. Then connect the Trapper T to earth ground. This device, and others we carry, do not offer protection in the event of a direct lightning strike. Not for transmitting.
*Order #3841* **$22.95**

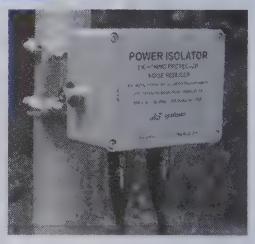
The similar **Zap Trapper C** model is for conventional receive-only coaxial installations and features a PL-259 plug. These devices can last for thousands of cycles.
*Order #2993* **$21.95**

## cushcraft LAC-4

Protect your equipment from unplanned current surges with a Cushcraft constant impedance **LAC4** series arresters. They feature a replaceable gas discharge tube which clamp voltage surges to less than 50 volts in 100 nanoseconds.

| Order | Model | MHz | Watts | I/O | Price |
|---|---|---|---|---|---|
| #0614 | LAC4 | 0-500 | 200 | SO239 | $44.95 |
| #3655 | LAC4N | 0-3000 | 200 | N | $59.95 |
| #3657 | LAC4H | 0-500 | 2000 | SO239 | $49.95 |
| #3642 | LAC4NH | 0-3000 | 2000 | N | $64.95 |

## RF systems POWER ISOLATOR




The **Power Isolator** is one of the most effective protection devices you can get for your radio system plus it reduces noise! The principle of Magnetic Transfer Isolation is based on the idea, that maximum protection can be reached if there is no connection at all between antenna and receiver. This became possible by the Magnetic Transfer technology, developed by RF Systems. Not only the braid of the coaxial cable, but the center conductor of the coax is grounded! This means that induced static charges flow harmlessly to earth and the signals received by the antenna are also flowing to earth. The MT Isolator uses this current to produce a magnetic field which is an exact copy of the received signals. The magnetic field is picked up and transferred by the special ferrite to the output where it is converted back into the received signal. On key advantage to this approach is reduced noise, especially below 10 MHz. You can also transmit through this device with up to 600 watts p.e.p. SSB. The weatherproof MT Isolator connects between your antenna and your radio with only 0.5 dB (0.3 typical) attenuation. Operates from 500 kHz to 50 MHz. SO-239 input/output. Made in Holland.
**POWER ISO** *Order #0482* **$289.95**

➤ Please see the **MFJ-1164** on page 47.

## ANTENNA WIRE

■ **14 GAUGE STRANDED COPPER**
Excellent and very malleable. 7/22 stranded construction. .072 nom. O.D.
*Order #2588* ..... **18¢ per foot**

■ **14 GAUGE COPPER-CLAD STEEL WIRE**
Hard drawn non-stretch steel center for excellent strength and copper-clad for protection and conductivity. Solid. .064 nom. O.D.
*Order #2637* ..... **15¢ per foot**

■ **14 GAUGE ENAMLED COPPER WIRE**
Quality solid copper wire for shorter antenna applications (under 100 ft.). Enameled coating protects from the elements. .064 nom. O.D.
*Order #2584* ..... **14¢ per foot**

■ **14 GAUGE FLEXWEAVE COPPER WIRE**
This ultra-flexible antenna wire will not kink or tangle. Can be tied and untied to insulators without soldering. Popular for portable and backpack antennas. Sold in 100 foot length.
*Order #4608* ..... **$15.95**

## COAXIAL CABLE

Coax cable is a key element in every radio system. All coax is not created equal! Our coax has a very tight (dense) braid to ensure maximum shielding and the jacket is of top quality vinyl.

■ **RG-58A/U 50 OHM**
This is standard grade coax cable. .195 nom. O.D. -3.4 dB/100 ft.@100 MHz.
*Order #2619* ..... **24¢ per foot**

**LMR-200**
*Order #3603* ..... **39¢ per foot**

■ **RG-8X 50 OHM**
This very popular flexible cable has similar low loss properties of the bigger RG8, but without its thickness. Great for shortwave antennas. .242 nom. O.D. 3.0 dB/100 ft.@100 MHz.

**Black** jacket RG-8X
*Order #2247* ..... **29¢ per foot**

**Gray** jacket RG-8X
*Order #2219* ..... **24¢ per foot**

**Clear** jacket RG-8X.
*Order #2208* ..... **25¢ per foot**

**LMR-240** (solid center conductor)
*Order#3604* ..... **55¢ per foot**

**LMR-240 Ultra** (stranded center conductor)
*Order #3605* ..... **59¢ per foot**

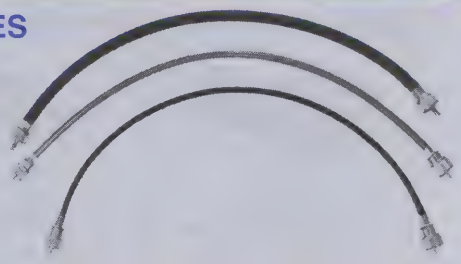
■ **RG-213 50 OHM**
This is a thicker lower loss coax cable that has a special non-contaminating jacket which will provide longer life. .405 nom. O.D. -2.0 dB/100 ft.@100 MHz.
*Order #2929* ..... **59¢ per foot**

■ **RG-8/U-TYPE LOW LOSS 50 OHM**
Super low loss type RG-8 coax. For long VHF-UHF runs. .405 nom. O.D.

**LMR-400** (foil and solid center)
*Order #3606* ..... **79¢ per foot**

**LMR-400 Ultra Flex** (foil and stranded center)
*Order #3607* ..... **$1.19 per foot**

## PREASSEMBLED COAX CABLES



As you add antenna accessories to your radio system, you will require coaxial "jumper" cables. If you add an antenna switch, a preamp or antenna tuner, you will need a jumper to connect the accessory to the antenna input of your radio. Do not let your jumper be the "weak link" in your monitoring installation. Universal Radio offers a complete line of quality coaxial jumper cables.

- ❖ Each cable is made with high quality coax.
- ❖ The connectors are soldered for best conductivity.
- ❖ Each cable uses high quality PL-259's
- ❖ The coax cable has 95% or better shield.

■ **RG-8/X Coax Cables**
Moderate price, coupled with very low loss and good flexibility combine to make this a favorite among hams and SWL's. (.242" O.D.). Our biggest seller. With PL-259 connector at each end.

- **RG-8/X 12"** PL-259 to PL-259 Jumper Cable *Order #2577* ..... **$4.49**
- **RG-8/X 18"** PL-259 to PL-259 Jumper Cable *Order #2578* ..... **$4.99**
- **RG-8/X 24"** PL-259 to PL-259 Jumper Cable *Order #2579* ..... **$5.49**
- **RG-8/X 36"** PL-259 to PL-259 Jumper Cable *Order #2580* ..... **$6.49**
- **RG-8/X 72"** PL-259 to PL-259 Jumper Cable *Order #3848* ..... **$7.95**
- **RG-8/X 9'** PL-259 to PL-259 Jumper Cable *Order #0525* ..... **$8.95**
- **RG-8/X 12'** PL-259 to PL-259 Jumper Cable *Order #3849* ..... **$9.95**
- **RG-8/X 25'** PL-259 to PL-259 Jumper Cable *Order #0539* ..... **$14.95**
- **RG-8/X 50'** PL-259 to PL-259 Jumper Cable *Order #0497* ..... **$19.95**
- **RG-8/X 75'** PL-259 to PL-259 Jumper Cable *Order #0512* ..... **$24.95**
- **RG-8/X 100'** PL-259 to PL-259 Jumper Cable *Order #0515* ..... **$29.95**

■ **RG-58/U Coax Cable 36 inch PL-259 to RCA Phono Plug**
Economy with good flexibility (.195" O.D.). With PL-259 connector at one end and a male RCA phono plug at the other. Used for connecting tuners or active antennas with phono plug output.

- **RG-58/U 36"** PL-259 to RCA Custom Cable *Order #3043* ..... **$5.99**

■ **RG-58/U Coax Cable 50 Foot PL-259 to Mini Plug**
50 feet RG-58/U with PL-259 connector at one end and a 3.5mm mini plug at the other. Used for connecting outdoor antennas to portable shortwave radios that have a mini external antenna jack.

- **RG-58/U 50'** PL-259 to Mini Plug Cable *Order #3588* ..... **$15.95**

## GROUND STRAP

This Groundstrap Cable comes in a 25 foot roll. It is 14 gauge and 1/2 inch wide.
**Ground Strap** *Order #4607* **$18.95**

## LADDER LINE

In 300 ohm or 450 ohm on 100 foot spools.
**300 Ohm 20 g ¼" sepr.** *Order #2647* **$16.95**
**450 Ohm 18 g ¾" sepr.** *Order #3028* **$16.95**

## GROUND WIRE

**Ground wire** should be kept as short and as straight as possible and go to a ground rod (at least 5 ft.), or a cold water pipe (*not* a gas pipe!).

■ **GROUND WIRE - 6 GAUGE SOLID COPPER**
*Order #0424* ..... **49¢ per foot**

## ROTOR CABLE

Buying the correct rotor cable will eliminate unnecessary trips up your tower. 8 conductor stranded with UV resistant PVC outer jacket.

■ **WCR301**
2 x 18 g and 6 x 22 g for runs under 125 feet.
*Order #1931* ..... **49¢ per foot**

■ **WCR302**
2 x 16 g and 6 x 18 g for runs under 225 feet.
*Order #1310* ..... **69¢ per foot**

■ **WCR304**
2 x 14 g and 6 x 18 g for runs under 325 feet.
*Order #4371* ..... **89¢ per foot**

## ANTENNA ROPE

This double braided polyester antenna rope will not be weakened by decay or mildew and is abrasion resistent. The color-sealed black polyester yarn used in the braided jacket protects the cord from ultraviolet light. Sold in 100 foot rolls.

| | | |
|---|---|---|
| 3/32"x100' | *Order #1397* | **9.95** |
| 1/8"x100' | *Order #2624* | **11.95** |
| 3/16"x100' | *Order #2263* | **14.95** |

## COAX-SEAL® SEALANT

If you have **any** type of outdoor antenna you should be using Coax-Seal®. This black rubber-based material specially designed to protect any outdoor connection or connector. It is made of a nonconductive, non-contaminating waterproof substance that remains flexible at any temperature (-30 to 180°F). Coax connectors are not waterproof and exposed solder connections can deteriorate! One box (60 inches x 1/2 inch) will protect nine connectors.
**Coax-Seal** *Order #1194* **$2.99**

Please visit our website for additional cable types plus attenuation and power capacity tables.

**www.universal-radio.com**

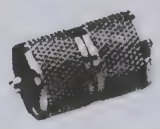
**PL-259**
UHF connector. Silver plated tip & Teflon
*Order #2111...*$**2.49**

**UG-175**
Reducer RG58/U
*Order #2117...*$ **.59**

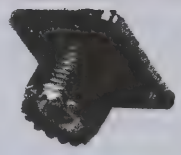
**UG-176**
Reducer RG59/8X
*Order #2115...*$ **.59**

**PL-258**
Barrel connector
*Order #2791...*$**1.99**

**UG-363**
Bulk head adapter
*Order #2795...*$**3.49**

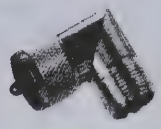


**Male-Male**
UHF coupler
*Order #2503...*$**2.49**



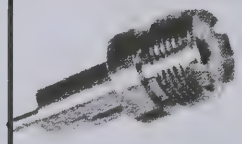
**SO-239**
UHF chassis. Teflon
*Order #1426...*$**2.49**

**"T"**
UHF connector
*Order #1142...*$**3.95**

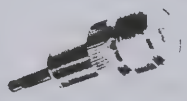


**90°**
UHF connector
*Order #1121...*$**3.49**

**UG-255**
SO-239 - BNC
*Order #2122...*$**2.95**

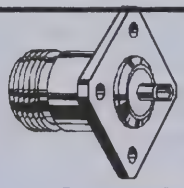


**SO 239-RCA**
Adapter
*Order #2118...*$**1.99**

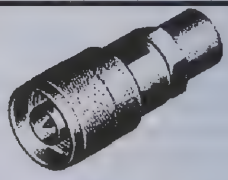


**SO 239-Mini**
Adapter
*Order #1619...*$**3.49**

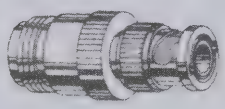
**RCA-PL259**
Adapter
*Order #2690...*$**1.99**



**"N" Chassis**
N Chassis Jack
*Order #3379..*$**4.95**



**"N"**
N [Accepts UG175/176]
*Order #4505...*$**4.95**



**UG-349**
N Female to BNC Male
*Order #4571...*$**4.95**

**UG-23**
"N" female RG-8
*Order #1852...*$**4.95**

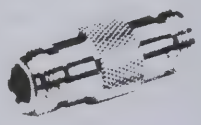
**"N" Female**
RG-59/RG-8X
*Order #2946...*$**4.95**

**UG-594**
90° "N" connector
*Order #0405...*$**6.95**

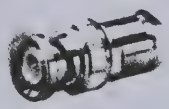
**UG-57**
"N" male-male
*Order #0037...*$**4.95**

**UG-83**
"N" female - PL-259
*Order #1384...*$**4.95**

**UG-146**
SO-239 to "N" male
*Order #3076...*$**4.95**

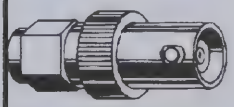


**UG-29**
"N" barrel connector
*Order #2760...*$**4.95**



**BNC**
RG-58
*Order #2376...*$**3.95**

**BNC**
RG-59/8X
*Order #2364...*$**4.95**

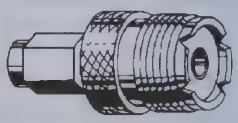


**SMA-BNC**
SMA Male to BNC Fem
*Order #0531...*$**5.85**

**BNC-PL259**
Adapter
*Order #2124...*$**4.95**

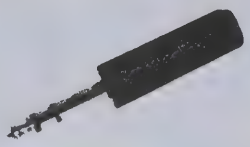
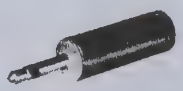
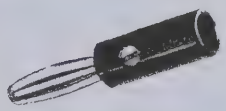
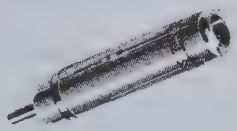
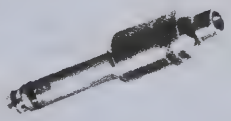
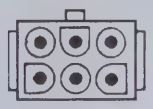
**BNC 90°**
Right Angle Adapter
*Order #0335...*$**4.95**

**MOTOR-BNC**
Adapter
*Order #1455...*$**3.95**



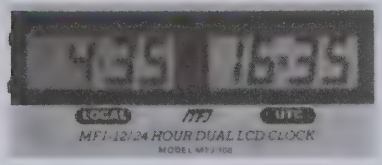
**SMA-UHF**
SMA Male to UHF Fem
*Order #2976...*$**4.95**

**For additional connectors and adapters please visit: www.universal-radio.com**

| | | | | |
|---|---|---|---|---|
| **2 Pin** Mic. connector *Order #1874...*$3.99 | **4 Pin** Mic. connector *Order #2400...*$2.99 | **5 Pin** Mic. connector *Order #2401...*$2.99 | **6 Pin** Mic. connector *Order #1919...*$3.19 | **8 Pin** Mic. connector *Order #2112...*$3.99 |
| **5 Pin** DIN plug *Order #1828...*$1.99 | **7 Pin** DIN plug *Order #2851...*$3.99 | **8 Pin** DIN plug *Order #1395...*$3.29 | **8 Pin** DIN plug-Kenwood *Order #2089...*$5.99 | **13 Pin** DIN plug-Kenwood *Order #0954...*$4.99 |
| **Phone 1/4"** Mono 1/4" phone plug *Order #1855...*$1.49 | **Phone 1/4"** Stereo 1/4" phone plug *Order #0878...*$1.59 |  **Phone 3/16"** Drake/Collins mic.plug *Order #2888...*$2.95 |  **Mini 1/8"** Mono mini plug *Order #0707...*$ .69 | **Mini 1/8"** Stereo mini plug *Order #2310...*$ .99 |
| **Sub Mini** Mono 3/32" plug *Order #1947...*$ .79 | **Phono Plug** RCA phono plug *Order #2389...*$ .89 | **Motorola** Antenna connector *Order #0305...*$ .79 |  **Banana Plug** Black *#1425...*$ .79 Red *#1017...*$ .79 | **RCA to 1/4"** RCA to 1/4" mono. *Order #1418...*$1.69 |
|  **1/4" to RCA** 1/4" mono to RCA. *Order #1427...*$1.99 |  **Mini to 1/4"** Mini mono to 1/4" *Order #1434...*$1.99 | **Mini to RCA** Mini mono to RCA *Order #1428...*$1.99 | **RCA to Mini** RCA to mini mono *Order #1558...*$1.99 | **KOK1** Grundig antenna plug *Order #0199...*$4.95 |
| **204** .051 I.D. power plug *Order #0910...*$ .99 | **210** .085 I.D. power plug *Order #0821...*$ .99 | **250** .097 I.D. power plug *Order #0963...*$ .99 | **TC-777** Fused cigar-plug *Order #0402...*$1.99 |  **DC Plug** Kenwood / Icom *Order #1451...*$5.95 |

**For additional connectors and adapters please visit: www.universal-radio.com**

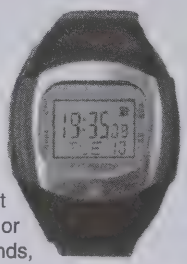
## MFJ-107B
## MFJ-108B




The **MFJ-107B** LCD clock features bold 5/8" inch numerals that display hour and minutes. 2 x 1 x 2 inches. The MFJ-108B features a *dual* display for both 24 hour UTC and 12 hour local time. 4 x 1 x 2 inches. Battery included with both models.

**MFJ-107B** *Order #0895* **$12.95**
**MFJ-108B** *Order #0990* **$21.95**

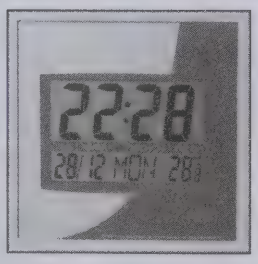
## MFJ-186RC



The **MFJ-186RC** radio-controlled wrist watch has 12 or 24 hour format and can be set to Pacific, Mountain, Central, or Eastern. It has running seconds, day-of-week and date display. It is water-resistant and has alarm and stop watch functions. Year, month, and day can be displayed in calendar mode. With battery. The MFJ-186RC (shown) is black. The MFJ-187RC version is stainless steel.

**MFJ-186RC** *Order #2439* **$28.95**
**MFJ-187RC** *Order #4757* **$37.95**

## MFJ-130RC



The **MFJ-130RC** super jumbo LCD radio controlled atomic clock uses 2 inch, digits to simultaneously display 12/24 hour time, date, day-of-week and temperature in either °C or °F (32-122°F). Measures 8.25 x 9 x 0.6". This clock automatically receives WWVB Fort Collins, Colorado time signals to provide amazing accuracy. Requires two AA cells not supplied. This clock may be hung on a wall.

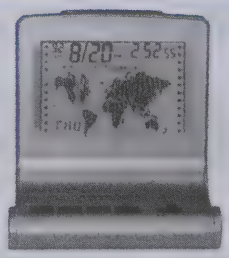
**MFJ-130RC** *Order #4488* **$28.95**

## MFJ-118

The **MFJ-118** jumbo LCD clock uses 1.25 inch, high-contrast digits to display time in 12 or 24 hour format. Can also display year, month, date and day of week. Measures 5.75 x 2.5 x 0.5 inches. Requires one AAA cell (not supplied).

**MFJ-118** *Order #3730* **$27.95**

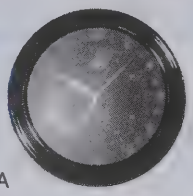
## MFJ-112B



The **MFJ-112B** DXer's 12/24 hour world map-clock not only shows you the time throughout the world, but it also indicates day-of-week, month, date and year. Push buttons let you move the display to any time zone on the world map. There is even a language display option for the day-of-the-week indication. It may be set for English, French, Spanish, German or Italian. Gray plastic case. With 24 hour alarm. This clock has a cool blue backlight feature for night viewing. It stays on for four seconds. 4.5x3.375x2.25 inches. Requires two AAA cells (not included).

**MFJ-112B** *Order #1921* **$26.95**

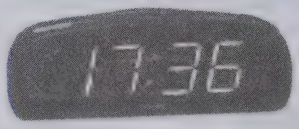
## MFJ-105C



The ten inch **MFJ-105C** 24 hour wall clock provides excellent visibility, even from across the room. A single AA cell (not supplied) provides one year of operation.

**MFJ-105C** *Order #3110* **$24.95**

## MFJ-113



The **MFJ-113** economy LED clock-alarm has a four digit 1.8" red LED display that can be set for 12 or 24 hour format. Also has 9 minute ID timer. A 9 volt battery (not supplied) provides backup. 110 VAC 60 Hz. Black 9 x 3.8 x 2.5 inches.

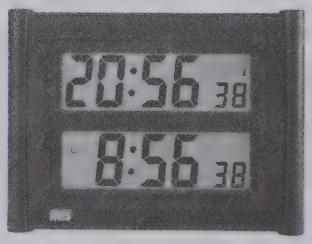
**MFJ-113** *Order #4262* **$19.95**

## MFJ-117

The huge **MFJ-117** LED clock is over 11 inches wide. The 2.5 inch LED display can be set for 12 or 24 hour format and comes with an AC adapter. Can be set on a desk or hung. A 9 volt battery (not supplied) provides backup power.

**MFJ-117** *Order #4267* **$37.95**

## MFJ-121



The **MFJ-121** atomic clock lets you simultaneously read UTC *and* local time. Huge 2 inch tall by 1½ wide LCD numerals with seconds display. Requires two AAA cells (not supplied).

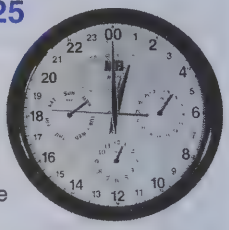
**MFJ-121** *Order #4484* **$74.95**

## MFJ-123

The **MFJ-123** solar powered *Eternity Atomic Clock* never needs batteries and you never need to set time! Ordinary room light powers the clock and replenishes the built-in rechargeable battery to run the clock in-the-dark. The whopping LCD display is 2 inches tall and 6.75 inches wide. Choose 24 or 12 hour time format. Has a huge running seconds display. The digital calendar mode gives you the day of the week, month, date, and year. Hang it on your wall or set it on your desk and forget it. 10.75 x 6.75 inches. Super attractive metallic tan fits in any decor.

**MFJ-123** *Order #2780* **$74.95**

## MFJ-125



The 12 inch **MFJ-125** quartz wall clock shows 24 hour and 12 hour time, day of week and day of month simultaniously! Requires one AA cell (not supplied).

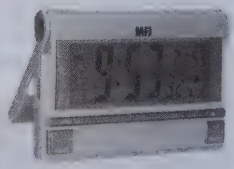
**MFJ-125** *Order #3794* **$32.95**

## MFJ-132RC

The **MFJ-132RC** atomic clock features: 24/12 switchable format, seconds display, date/day, snooze/timer, backlight. It is gray with a snooze/light bar switch at the top. Like all the Atomic Clocks we offer, it is designed for use only in the U.S.A., as these devices stay accurate by automatically synchronizing with the WWVB 60 kHz time station in Boulder, Colorado. It also has an indoor temperature display in the range of 32 to 122°F. 3.5 x 4 x 1.6 inches. Requires two AA cells (not supplied).

**MFJ-132RC** *Order #3126* **$15.95**

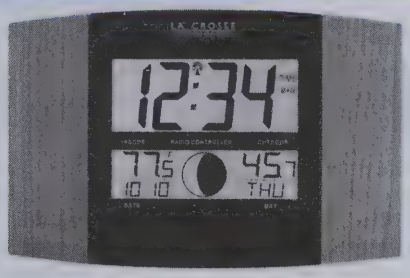
## MFJ-133RC



The **MFJ-133RC** backlit LCD clock can display two time zones in 24 or 12 hour format. The main display can be set for any USA time zone. The second display can be set for any time zone including UTC! Atomic - WWVB for absolute accuracy! Huge 1 1/8 inch high-contrast LCD numerals with alarm and snooze function. Only 4x3x¾ inches. Requires two AAA cells (not supplied).

**MFJ-133RC** *Order #0237* **$32.95**

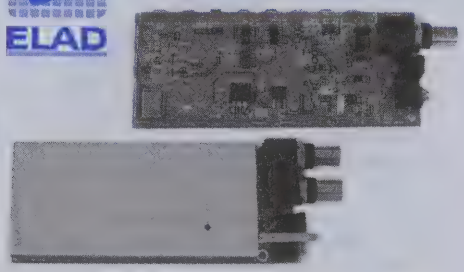
## LA CROSSE TECHNOLOGY WS-8117



The **La Crosse Technology WS-8117U-O** digital wall clock features radio controlled time and date It also displays the indoor temperature in the range of 32°F to 122°F (0°C to 50°C) and outdoor temperature in the range of -21.8°F to 156.2°F (includes TX6U outdoor wireless temperature sensor). The day name can be displayed in English, French or Spanish. It has dual LCD screens and can display in 12 or 24 hour format. It handles these time zones from UTC to –12 UTC: UTC (GMT), Atlantic, Eastern, Central, Mountain, Pacific, Alaskan and Hawaiian time. Requires a total of four AA cells (not supplied). There is a flip-out stand for table-top use. The clock size is 12.20 x 1.18 x 8.03 inches. Battery life is about 12 months. WS-8117U-O is oak and WS-8117U-C is cherry.

| | | |
|---|---|---|
| **WS-8117U-O** | *Order #1449* | $39.95 |
| **WS-8117U-C** | *Order #3778* | $38.95 |

## ELAD FDM45512 FDM10712



The Elad Company of Italy makes high performance down-converters for DRM signal reception. The **FDM45512** connects to the 455 kHz output of your receiver and the output of the down-converter is connected to your PC's sound card. The board is compatible with DReaM software. The required software is available separately. Requires 12 VDC. IF input is BNC. The variable 12 kHz output is 3.5mm. (Shown above top).

| | | |
|---|---|---|
| **FDM45512** | *Order #1667* | $99.95 |

The **Elad FDM10712** is similar, but for receivers with a 10.7 MHz IF output. It also features a BNC to BNC IF output loop-through.

| | | |
|---|---|---|
| **FDM10712** | *Order #0553* | $149.95 |

**Elad SR** DRM decoding Windows software CD.

| | | |
|---|---|---|
| **SR** | *Order #0453* | $79.95 |

## RADIO STANDS

This handy clear plastic stand supports your portable shortwave at the optimum viewing angle. (The radio shown is not included). Size: 6.75 x 4.5 x 4.75 inches (5.2 inches on the slant).

| | | |
|---|---|---|
| **Clear Stand** | *Order #0022* | $8.95 |

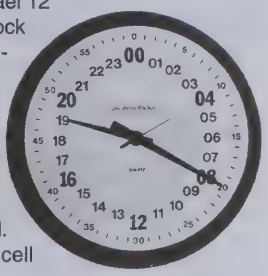
Translucent blue mini-stand for smaller portable radios. 7" wide, but only 3" on the slant.

| | | |
|---|---|---|
| **Mini Trans. Blue** | *Order #4270* | $6.95 |

This clear radio stand to hold E1 at optimum viewing and operating angle. (Shown on page 5).

| | | |
|---|---|---|
| **Large Stand** | *Order #3873* | $16.95 |

## Benjamin Michael Industries INC. 973A 962AD



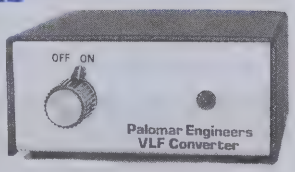
The Benjamin Michael 12 inch 24 hour wall clock will add a professional touch to any listening post. It is quartz based with accuracy better than 15 seconds per month. With sweep second hand. Requires one AA cell (not supplied).

| | | |
|---|---|---|
| **B-M 973A-BL** | *Order #3026* | $44.95 |

As above, but 8 inch and 12 hour format with red secondary numerals for hours 13 through 24.

| | | |
|---|---|---|
| **B-M 962AD-BL** | *Order #1289* | $22.95 |

## PALOMAR ENGINEERS VLF-A/S



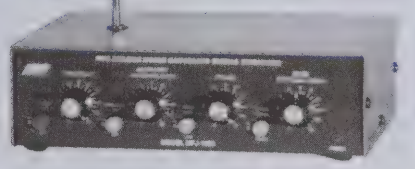

If your receiver covers 3.51-4 MHz you can enjoy the world of VLF/LF reception with the **Palomar VLF-A** converter. This device will permit the reception of the 10 - 500 kHz which includes navigational beacons, standard frequency broadcasts, the 1750 meter ham band and the European LW broadcast band (propagation permitting). SO-239 input and output. Requires a 9 volt battery and PL259 coaxial jumper cable (not supplied - see page 43). 4.25 x 5 x 2".

| | | |
|---|---|---|
| **VLF-A** | *Order #0438* | $94.95 |

Same as above but converts to 4.01-4.5 MHz.

| | | |
|---|---|---|
| **VLF-S** | *Order #2717* | $94.95 |

## MFJ-1026



The **MFJ-1026** turns your antenna into a directional phased array. The 60 dB null wipes out interference and noise, before it gets into your receiver. This device works 1.8-30 MHz in all modes including AM, CW, SSB, FM and RTTY. You can instantly change from nulling to peaking a signal at a push of a button and improve weak signal reception. You can dig out a weak station hidden under a powerful one on the same frequency. The MFJ-1026 plugs between your antenna and receiver (or transceiver). If used with a transceiver, the RF sense T/R switch bypasses during transmit. Requires 12 VDC or optional MFJ-1312D. 6.5x1.5x6.25" (165x38x159 mm). The MFJ-1025 is the same as the MFJ-1026 but without the built-in active antenna.

| | | |
|---|---|---|
| **MFJ-1026** | *Order #3541* | $169.95 |
| **MFJ-1025** | *Order #3542* | $154.95 |
| **MFJ-1312D** | *Order #2433* | $15.95 |

- In order to avoid the confusion of many time zones, hams, military, marine and international broadcasters always refer to time at the zero meridian which runs through Greenwich, England. This time zone is five hours ahead of Eastern Standard Time (4 hours ahead of Eastern Daylight Time). This 24 hour format may also be called Coordinated Universal Time (UTC) or GMT. For example 4:00 PM EST = 21:00 or 4:00 pm EDT = 20:00 UTC.
- Shortwave listeners can hear ultra accurate time signals by tuning station WWV in Boulder, Colorado at 2500, 5000, 10000, 15000 or 20000 kHz. Canadian listeners should try for CHU Ottawa on 3330, 7335 or 14670 kHz.

## Klingenfuss RTTY MODE CD

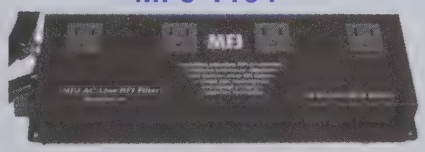
Noted author Joerg Klingenfuss has produced an audio CD set of 71 emission types. This 2½ hour, **two audio CD set** allows rapid access to the typical sound of all conventional and exotic shortwave transmission modes. Connect your audio CD player to your teletype decoder to practice tuning these modes. Synchronization is perfect as a result of digital recording techniques. **Part 1.**

| | | |
|---|---|---|
| | *Order #0220* | $69.95 |

The new **Part 2** contains 120 new recordings, again on two audio CDs.

| | | |
|---|---|---|
| | *Order #0035* | $69.95 |

## MFJ-1164



The **MFJ-1164** reduces AC power line RFI, noise, transients, surges generated by computers, motors, RF transmitters, static/lightning by 30 dB and up to 60-80 dB with good earth ground. It provides inductive isolation, capacitive decoupling, RFI rejection, over-voltage protection. MFJ-1164 has four 3-wire, 15 Amp, 120 VAC outlets that are spaced for large adapters. 25 Amps/3000 Watts max. Aluminum case 12 x 3½ x 2 inches.

| | | |
|---|---|---|
| **MFJ-1164** | *Order #4743* | $54.95 |

## West Mountain Radio
### RIGBLASTER

The **West Mountain Radio RIGblasters** provide the easiest way to properly connect your radio to your computer's sound card so that you may operate using any present or future ham radio sound card software. RIGblasters are compatible with almost every radio and every sound card equipped computer. It is easy to adjust the audio to any radio's mic. input. Opto-isolators are used to the fully isolate the computer ground circuit (other interfaces require extra ground screws, extra wires and extra cables to eliminate ground loops). All required cables are included for easy hook up using fully isolated audio and computer keying circuits. Effective RFI suppression eliminates RF in the audio. Positive and fully automatic PTT control or VOX operation is available. This is a quality product, supplied in sturdy 1/16 inch aluminum cases, powder coat painted and silk screened (no plastic pill boxes, sharp edges or plastic coated metal). Double sided 1/16 inch fiberglass plated through, solder masked and silk screened printed circuit boards are used with commercial quality mini toggle switches. Stainless steel black anodized hardware is included.

The **RIGblaster "Plus"** model additionally features true keyed Morse and true FSK RTTY.

The Standard and Plus both come with 120 VAC power supply, cables, instruction manual and software CD. The supplied CD updates most Windows ham radio sound card programs. It includes freeware for almost every mode including but not limited to: PSK31, Packet, FSK441, MFSK16, Hellschriber, AMTOR, PACTOR I, MT63, CW, RTTY and SSTV. One full year parts and labor guarantee by West Mountain Radio.

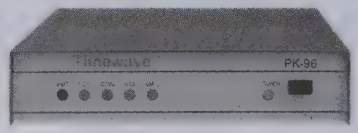
*#0000* **RigBlaster M8 Standard** Sold Out
*#2227* **RigBlaster Plus** $129.95

## West Mountain Radio
### RIGBLASTER NOMIC

The **RIGblaster Nomic** is small, inexpensive and perfect for portable, QRP or temporary setups. It uses PTT keying circuit as a fully isolated CW/FSK keying output for direct keying of your rig's CW or FSK instead of using it for a sound card interface. No external power supply is needed! The supplied CD updates most Windows ham radio sound card program. It includes freeware for almost every mode including but not limited to: PSK31, Packet, FSK441, MFSK16, Hellschriber, AMTOR, PACTOR I, MT63, CW, RTTY and SSTV. Now with 8 pin *or* modular mic jack compatability.

*#1983* **RigBlaster Nomic Universal** $64.95

## TIMEWAVE TECHNOLOGY INC.
### PK-96



The **PK-96** is a plug-in and go 9600/1200 bps TNC that comes standard with 18K of battery-backed MailDrop memory which is easily expandable to 100K. A demo copy of PK-term'99 is included. This Windows 95/98/ME/2000/NT menu-driven software from CSS makes operating the PK-96 easy. The included shareware WinAPRS™/GPS program allows you to see where other APRS users are. Requires 12-16 VDC @400 mA.

List $219.95 *Order #4453* ..... **$209.95**

### PK-232/PSK

The **Timewave PK-232/PSK** brings a new level of performance to the legendary PK-232 with sharp, accurate DSP filters and supports all the new sound card modes in addition to all of the existing PK-232 modes (Pactor, VHF/HF Packet, AMTOR/SITOR, Baudot, ASCII, Morse, HF Weather FAX, TDM and NAVTEX), plus has PBX built in. Requires 12-16 VDC @700 ma.

List $539.95 *Order #4446* ..... **$519.95**

## West Mountain Radio
### RIGBLASTER PRO

This advanced **Pro** model incorporates the time proven operation of the M8 and plus model RIGblasters. New features include:

- ✔ Easier to set up and operate than ever before.
- ✔ Front panel LED status displays of PTT, CW, FSK, audio source and transmit audio level.
- ✔ Built in control interface for Yaesu CAT or Icom CI-V or Ten Tec TTL.
- ✔ Transmit speech processing.
- ✔ Receive audio muting.
- ✔ Two independentc keying outputs, one for true FSK, and another for keyboard CW keying.
- ✔ Electret microphone bias circuit.
- ✔ Second mic. operation.
- ✔ Dual headphone outputs with 1/8" & 1/4" jacks.
- ✔ Dual RCA type, PTT input and output jacks.
- ✔ Power ON/OFF switch.

Only 10.75 x 1.5 x 5.75 inches 19 oz. 120 VAC. If your newer PC has a USB, but no RS232 post, buy the RS232-USB adapter (see Options below).

*#2223* **RigBlaster Pro** $239.95

### RIGBLASTER OPTIONS

| | | | |
|---|---|---|---|
| *#1930* | **4T8/K1T** | 4 to 8 Pin Adapter | $21.95 |
| *#3074* | **RJ/CBL** | RJ45 to RJ45 cable 3' | $6.95 |
| *#3158* | **FT100/CBL** | RJ45 to RJ22 cable 3' | $14.95 |
| *#4786* | **RS232-USB** | Serial-USB Adapter | $29.95 |

## Kantronics
### KPC-3 +

The **KPC-3+** is a small full-featured packet TNC. It comes standard with 128K Ram expandable to 512K. Like all Kantronics TNC's, the KPC-3 comes with PBBS, KA-Node, Host Mode, Kiss and WEFAX capabilities. The new "Plus" version features: two A/D inputs, two digital output control lines, digital pots so audio drive can be set from the PC, APRS commands and 250 page manual. Requires 6 to 25 VDC at 30 mA.

List $198.00 *Order #1908* ..... **$189.95**

### KAM XL

The **Kantronics KAM-XL** is a dual port, multi-modem TNC for both HF/UHF and VHF with room for new modes and future upgrades. With a GPS connected, you can beacon your position to others via HF, UHF or VHF. The KAM XL is engineered to work with APRS™ software and supports advanced UI frame digipeating functions. The popular Kantronics KAM "gateway" feature between ports 1 and 2 allows for local packet to be received, then transmitted over HF. 480K mailbox. Neds 12 VDC.

List $409.00 *Order #2069* ..... **$399.95**

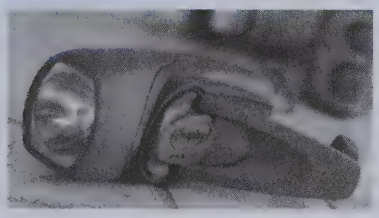
## West Mountain Radio
### RIGBLASTER PLUG & PLAY

The **West Mountain Radio RIGblaster plug & play,** unlike the other RIGblasters, is designed to connect through a radio's data jack. The new plug & play easily connects to an accessory or data jack on the rear of a radio Connection to the computer is by USB providing Windows® "Plug and Play"™ installation. A built-in USB to serial converter provides T/R switching, CW keying and CAT/CI-V rig control. The plug & play has fully isolated audio and keying, runs from USB power, and it is rugged and compact with a built in TTL level CAT or CI-V rig control interface. LED indicators: USB, PTT and CW. Includes USB cable, computer audio and CD. Most radios will additionally require a RigBlaster Data Jack Adapter which sells for $9.95. Other optional cables include: CW Cable and Rig Control Cable. Please call, or visit our website for ordering the correct cables for your transceiver.

*#4746* **RigBlaster Plug & Play** $99.95

**1 800 431-3939**
**www.universal-radio.com**

## Coleman SENTINEL



The **Coleman Sentinel** incorporates fail-safe *Freeplay* wind-up technology, together with ultra-bright recharge capability. Don't be left in the dark by dead batteries. A 30 second wind gives approximately 8 minutes of light on normal beam and you can rewind at any time for as much shine-time as you want. An LED charge level indicator tells you the optimal winding speed. The AC recharge system gives 30 minutes of ultra bright light, or 5 hours of regular light, using a high-efficiency, xenon-filled, dual-filament bulb. AC/DC adapter included. Size: 10x7.5x3.2 inches 1.6 Lbs. Red.

| | | |
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| **Sentinel** | *Order #2464* | **$29.95** |

The **Freeplay Sherpa** is the same as above, but with a striking translucent blue case.

| | | |
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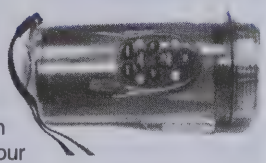
| **Sherpa** | *Order #3125* | **$32.95** |

## SunStar SUNTAP SPLASH



The **SunTap Splash** solar panel even charges from indoor light. But, you can also plug it into an outlet, hook it up to your cigarette lighter, or pop in a couple of AA cells. The SunTap Splash stores this power in an internal non-memory energy cell for immediate or later use. This cell doesn't have to be fully discharged before it is recharged, giving it a much longer life. The SunTap Splash is a flashlight *and* an FM auto-scan radio (88-108 MHz). It even has a siren and red LED flashers for emergencies and comes with the bike clip. Great for fishing, camping, boating or swimming, because it is waterproof. 2.75 x 2.75 x 6.5".

| | | |
|---|---|---|
| **Suntap Splash Blue** | *Order #4509* | **$24.98** |
| **Suntap Splash Yellow** | *Order #2404* | **$24.98** |

## SunStar SUNBURST COMBO

Be prepared with this handy AM/FM radio and flashlight combination. This **Sunburst Combo** is powered by solar cells or a hand cranked dynamo that recharges the internal cells and may also be powered from ordinary AA cells or AC3 adapter (both optional). Attractive yellow all weather case. With siren function and earphone jack. 8.5 x 4 x 3.9".

| | | |
|---|---|---|
| **Sunburst** | *Order #3783* | **$27.98** |
| **AC3** | *Order #1527* | **$14.95** |

## AOR SA7000

The **AOR SA7000** super wide range receiving antenna covers from 30 kHz to 2 GHz. This 6 foot (1.82 m) passive antenna has two vertical elements with built-in duplexer. It includes 50 feet (15 m) of RG-58 coax lead-in to a BNC plug. The SA7000 is a strong choice for the AOR AR5000, AR8200 or AR8600. *Order #3755* **$209.95**

## AOR LA380

The **AOR LA380** is a wideband HI-Q active receiving loop antenna. The antenna covers from 10 kHz to 500 MHz. The built in amplifier provides up to 20 dB of gain. There are also two presets for 40 kHz (Japanese time station), 60 kHz (USA/UK time stations). Variable tuning is available for 3 to 40 MHz and fixed tuning for 60 kHz to 3 MHz and 40 to 50 MHz. This indoor antenna is ideal when space is at a premium. Output is via a BNC jack and a BNC to BNC patch cable (39 inches) is supplied. A 120VAC power supply is included.

| | | |
|---|---|---|
| **LA380** | *Order #0380* | **$369.95** |

## MFJ MFJ-1022

The compact **MFJ-1022** wideband indoor active antenna boasts coverage from 300 kHz to 200 MHz. It includes detachable 20 inch antenna. The output jack is an SO-239. A red LED is on the front panel to remind you that the antenna is on. This device requires a 9 volt battery (not supplied), 9-18 VDC or optional MFJ-1312D power supply.

| | | |
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| **MFJ-1022** | *Order #3109* | **$54.95** |
| **MFJ-1312D** | *Order #2433* | **$15.95** |

## UNIVERSAL FLASHLIGHT

The basic Universal Radio flashlight is black and features a snap-out carry ring. With two C cells.

| | | |
|---|---|---|
| **UR Flashlight** | *Order #4099* | **$3.49** |

## RF systems DX500

The RF Systems DX500 is a small, 16 inch stainless steel active receiving antenna with a frequency range of 30 kHz to 550 MHz. It is powered by either a 12 Volt DC battery supply or optional DC power supply. The DX 500 antenna is very unobtrusive and can be mounted in nearly every situation thanks to a large range of optional mounting devices. Several indoor control boxes make it possible to connect the antenna to different receiver configurations, such as a shortwave receiver, a wideband scanner, a computer controlled receiver or up to three receivers to be used at the same time, whereby each receiver operates as though it is connected to its own independent antenna. Several optional mounting brackets make it possible to mount the antenna nearly anywhere: on a balcony rail, a short mast, a wall, hanging on the balcony above yours, a rain gutter, a tilted plane like a windowsill or in front of a window. This antenna attracts little attention. You **must** order one of the following indoor control units (sold separately). The control units require 12 VDC.

The **DX 500/1** control unit has one wideband output for a single receiver, like a shortwave receiver, a scanner or a wideband receiver. Output is to a single BNC jack.

The **DX 500/2** control unit has two outputs: one for a communications receiver for 30 kHz to 32 MHz and the other with a range from 32 to 550 MHz for a scanner. The built-in duplexer ensures no mutual influence. Output is an SO239 for 30 kHz to 32 MHz and a BNC for 32-550 MHz.

The **DX 500/3** control has three outputs: output one for long-wave (30 to 520 kHz), output two for 520 kHz to 32 MHz and a third output for 32 to 550 MHz. The built-in triplexer ensures that every receiver works as if it is connected to its own antenna. Output for longwave is BNC, output for HF is SO239 and output for VHF/UHF is IEC.

The DX500 is supplied with 39 feet (12 m) of antenna cable terminating to a solderless IEC plug that will fit into the antenna input of the antenna control units (sold separately). Cables from the control units to your radio/s and mounts are not supplied. See our website for more details.

| | | |
|---|---|---|
| **DX500** | *Order #2042* | **$269.95** |
| **DX500/1 Control unit** | *Order #0717* | **$69.95** |
| **DX500/2 Control unit** | *Order #0593* | **89.95** |
| **DX500/3 Control unit** | *Order #2209* | **119.95** |
| **AK2 Wall Mount kit** | *Order #1720* | **$34.95** |
| **STAND Vert. Mount** | *Order #4189* | **34.95** |
| **MARINE Swiv. Stand** | *Order #0998* | **57.95** |
| **DX500EXT 50 Ft ext.** | *Order #2074* | **44.95** |

## SPECIAL NOTE

The **wideband antennas** shown on this page have coverage to receive shortwave *and* scanner (VHF/UHF) frequencies.

For **shortwave antennas** see pages 32-36.
For **scanner antennas** see pages 50-51.

## PAR ELECTRONICS MON3

The **PAR MON3** omni base antenna has been optimized for receive on: 144-174, 440-470 and 800-900 MHz. Height: 20 inches. Width: 38 inches. Connector: SO-239. Gain: 1.7 dBi. Impedance: 50 ohms. Mast and cable are not supplied.

**MON3** *Order #4464* **$58.95**

## Valor "The Clear Connection" 651B

The **Valor 651B** mobile scanner antenna features an 18 inch black fiberglass helic wound whip element with 3/8 inch ferrule. It screws into a silver colored magnet mount which is prewired to a 12 foot length of coax cable that terminates to a Motorola plug. Covers 30-1200 MHz.

*Order #2246* **$24.95**

## TGS

The **Valor TGS** is an attractive black 23" through-the-glass mobile scanner receiving antenna that looks like a cellular car antenna. It covers 112 - 1200 MHz and is complete with cable, connectors and terminates to a Motorola plug. *Order #0876* **$34.95**

## PDC-63 & PDC-64

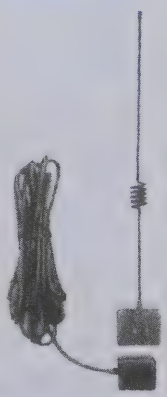
The **Valor PDC-63** antenna coupler allows your scanner to share a standard AM/FM car antenna. The coupler then feeds your AM/FM auto radio *and* your scanner radio independently. Output is Motorola plug to car radio and also to the scanner.

**PDC-63** *Order #1790* **$19.95**

The **Valor PDC-64** coupler is the same, but with a BNC output jumper for BNC type scanners.

**PDC-64** *Order #4534* **$19.95**

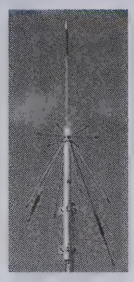
## ProComm Inc. PC-SGM/MKT



The **ProComm PC-SGM/MKT** is an attractive black 26 inch through-the-glass mobile scanner antenna that looks like a cellular car antenna. It covers 30 to 1200 MHz (receive only) and comes with a 15 foot of RG-58U coaxial cable that terminates to a Motorola plug. ProComm includes a Motorola to BNC adapter. So it will work with scanners that use a Motorola jack *or* a BNC jack.

**PC-SGM/MKT** *Order #0373* **$28.95**

## AOR DS3000



The **AOR DS3000A** is a quality VHF-UHF discone receive antenna covering 75 to 3000 MHz. The small size is ideal for confined space such as an apartment balcony. It uses a low-loss N connector. It is only 2.9 feet (0.9m) tall and weighs 1.55 Lbs. A 32 foot RG-58A/U cable with an N plug at each end is included. It mounts to a 0.8-1.5 inch mast (not supplied) with two supplied U clamps.

*Order #3751* **$124.95**

## DA3000

The **AOR DA3000** is a 16 element, omnidirectional discone receiving antenna covering 25 to 2000 MHz. It includes 50 feet (15 m) of RG-58 coax lead-in to a BNC plug. This 42" antenna is great for wideband scanners. With U bolts.

*Order #2924* **$139.95**

## MA500

The **AOR MA500** is a 29 inch (740 mm) magnet mount mobile antenna covering 25 to 1300 MHz. It includes a 13 foot (4 m) coax cable terminating in a BNC plug.

*Order #2616* **$109.95**

## DA5000

The **AOR DA5000** high performance, commercial grade UHF discone receive antenna covers 700 to 3000 MHz. It uses a low-loss N connector. Antenna gain is 2.5 dB (max.). Overall length is 1 foot. Radials are 5.7 inches. Horizontal elements are 3.2 inches. Weight is 1.6 lbs. Impedance is 50 ohms. Very low loss coaxial cable (not supplied) must be used with this antenna. The DA5000 comes with a mounting mast, mast clamp and instructions. Will fit over a mast between 1 and 2 inches diameter.

**DA5000** *Order #0603* **$339.95**

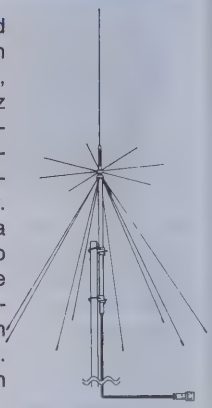
➤ Please see the **AOR SA7000** on page 49.

## Dragon STB2

The **Dragon STB2** is a low gain scanner antenna expressly designed for short range reception. Yes, there are times where you want to restrict the range of your scanner. This is especially true at sporting events such as car races. This antenna is less than 1.5 inches tall and terminates to a BNC.

**STB2** *Order #4045* **$9.95**

## ICOM AH7000



The **AH7000** receives solid from 25 to 1300 MHz and can be used for transmit on 50, 144, 430, 900 and 1200 MHz ham bands. The discone design offers the best performance possible in an omnidirectional antenna. This 5½ ft. (1.7m) antenna attaches to a mast (not supplied) with two supplied U-bolts. The AH7000 comes with a preassembled 50 foot cable with an N connector at each end. Connects directly to the Icom R7000, R7100 or R8500.

**AH7000** *Order #0828* **$169.95**

This adapter converts the N male to a BNC male.

**UG349** *Order #4571* **$4.95**

This adapter converts the N male to a PL-259.

**UG83** *Order #1384* **$4.95**

## Antenna Specialists MON731

The **Antenna Specialists MON731** scanner base antenna covers 50 to 894 MHz. It features a 50 inch center element with a coil in the center that plugs into a NMO base. It includes KTF630 adapter base with four 27 inch radials and comes with a bracket and two U bolts to connect to a 1 to 1¼ inch mast (not supplied). The base of this antenna has a low-loss N to accept an N plug.

*Order #3376* **$99.95**

## MON751

The **Antenna Specialists MON751** Mosaic-style mobile scanner antenna covers 50 to 894 MHz. It features a magnetic mount with 12 feet of RG-58/U coax, terminationg to BNC plug. This 56 inch antenna has a black base, and silver colored spring and whip element with a center coil. Includes an Allen adjustment wrench.

**MON751** *Order #1534* **$69.95**

## MON752

The **Antenna Specialists MON752** Mosaic-style mobile scanner antenna covers 50 to 894 MHz. It features a NMO trunk lip mount with 17 feet of RG-58A/U coaxial cable, terminating to a BNC plug. This 56 inch antenna has a black base, a silver colored spring and whip element with a center coil. Includes an Allen adjustment wrench.

**MON752** *Order #1519* **$79.95**

Niljon Antennas

## SUPER M

The **NIL-JON Super M** Base may have an unusual appearance, but it is a versatile VHF-UHF antenna providing high performance in the range of 25 to 1300 MHz. The unique design is dual polarized to provide a big signal at the horizon and out of the valley. The three elements are between 16.5 and 19 inches. This Super-M base version includes the NMO adapter and the ground plane kit. The ground plane kit terminates to an SO-239, ready to accept a standard PL-259 plug. (Coax, PL259 and mast are not supplied).

**SuperM Base** *Order #2063* **$99.95**

The Super M is also available in a mobile configuration. It consists of just the base and 3 elements. The base requires an NMO mount. Mount and coax cable are not provided.

**SuperM** *Order #4538* **$79.95**

## Maldol AH-W100RX

The **Maldol AH-W100RX** scanner receive antenna covers 70 to 900 MHz. The telescoping base is marked with a chart. You can extend one to eight elements to optimize reception in a given band. It features a double fold-over hinge for convenience. The telescopic whip antenna is 40 inches extended, but collapses down to 8 inches. It terminates to a male BNC plug.

**AH-W100RX** *Order #3744* **$29.95**

## Maldol AL-500H/HS

The **Maldol AL-500H** scanner antenna is optimized to receive the commercial and government air bands. This rubber duck style antenna provides peak performance from 116-174 and 230-360 MHz. 20 inches. BNC plug.

**AL-500H** *Order #1687* **$44.95**

Same as above, but with an SMA plug.

**AL-500HS** *Order #4784* **$44.95**

## HUSTLER DCX

The **Hustler DCX** is a discone base antenna that provides good omni-directional coverage from 40 to 999 MHz. This 55 inch (1.4 m) antenna easily mounts to any mast (not supplied) with supplied hardware. Has SO239 to accept PL259. Lead-in not supplied

**Hustler DCX** *Order #1205* **$23.95**

## COMET DS150

The **Comet DS150S** discone antenna receives solid from 25 to 1500 MHz and can be used for transmit on 50, 144, 430, 900 and 1200 MHz ham bands (under 100 watts). This stainless steel antenna is 4.6 feet (1.4m) high and attaches to any standard mast from 1.2-2.4 inches (30-62 mm) with the supplied U-bolt. The mast is not supplied. Weight is 3.2 lbs (1.45 kg). Terminates to an SO-239 and comes with a 65 foot (20m) RG-58A/U coax cable with PL259s at each end.

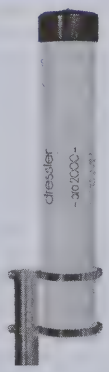
*Order #3587* **$94.95**

## CREATE 5130-2N

The **Create Log-Periodic 5130-2N** is a log periodic antenna for the range of 105-1300 MHz. It features 19 elements providing 10 to12 dBi. It can be used for receive and transmit (to 500 watts). The boom length is 4 feet 6 inches and weighs only 6 lbs. It is wind rated to 90 mph. It mounts on a 1.5 to 2 inch mast. Mast and lead-in cable are not provided. A low loss N connector is utilized.

**Create 5130-2N** *Order #1825* **$319.95**

## dressler hochfrequenztechnik gmbh ARA 2000LL



The **Dressler ARA2000LL** is a high performance, professional active receive antenna for the range of 50-2000 MHz. Gain is 12.5-14.5 dB and the Third order IP3 is +36 dBm. The Noise figure is 3.6-6 dB. The modified conical antenna structure gives the antenna very wideband reception and can pick up in both the horizontal and vertical fields. The active section employs a monolithic microwave integrated circuit preamp with a very low noise figure, followed by a high current final stage for good large signal handling capability. Operates from 12.5 VDC 100 ma. with supplied AC power supply. This preamp is for receive-only applications. It utilizes an N connector. This antenna is 18 inches high with a diameter of 3.6 inches. This *LL* low loss version includes 40 feet of LMR240 coax with an N male at each end. The antenna attaches to a mast 1.5 to 2 inch mast (mast not included). Made in Germany. Limited one year warranty by American distributor BPT.

**ARA2000LL** *Order #1161* **$469.95**

## DIAMOND ANTENNA D220

The **Diamond D220** mini discone antenna receives solid from 100 to 1600 MHz! It can also be used for transmit on 144, 430, 904, 1200 MHz (under 50 watts). This stainless steel antenna is 35.5 inches (with a 8.5 inch maximum diameter). The mount is *not* supplied. Weight is 1.2 lbs. The D220 terminates to a 50 ohm male UHF [PL259] type connector. This will fit directly into a PO type mount (not supplied), thus making it theoretically appropriate for some mobile application.

*Order #0312* **$89.95**

## DIAMOND ANTENNA D-130J

The **D-130J** super discone antenna is an ultra-wide-band omni-directional antenna that offers solid coverage from 25 to 1300 MHz. This lightweight antenna (2.2 lbs) is made of precision tooled stainless steel. It has an SO-239 jack to accept a PL-259. Cable and mast not supplied.

**D-130J** *Order #2405* **$89.95**

## DIAMOND ANTENNA RHF40

The **Diamond RHF40** is a strange HT antenna for 2 meters and 440 MHz. The top 13 inches of the antenna is completely flexible ... just like a pipe cleaner. It can be twisted into almost any shape. The total length of the antenna is 16 inches. The RHF40 is also a capable wideband receive antenna for 120/150/300/450/800/900 MHz. The base terminates to a 50 ohm BNC.

List $31.95 *Order #0795* **$27.95**

The **SRHF40** is the same but with an SMA plug.

List $29.95 *Order #4730* **$26.95**

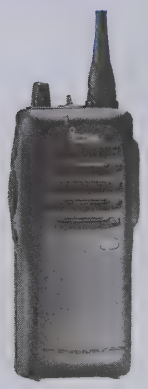
## DIAMOND ANTENNA RH77CA

The **Diamond RH77CA** is a popular 2M/440 transceive HT antenna. It is also immensely popular with scanner users because it can additionally receive well on: 120, 150, 300, 450, 800 and 900 MHz. This thin, flexible, black antenna is 15 inches and terminates to a 50 ohm BNC. *Order #2368* **$21.95**

The **Diamond SRH77CA** is similar, but terminates to an SMA. *Order #0491* **$24.95**

ICOM

## IC-F21BR



- FRS/GMRS/BRS
- 2 Channels
- Privacy Codes
- Frequency Find
- CTCSS/DCS Encode
- CTCSS/DCS Decode
- MIL-STD 810 Rugged
- 2 Watts
- Drop in Charger

The **ICOM F21BR** is a versatile radio that allows you to blend personal and business use in one radio. It functions in the GMRS General Mobile Radio Service (simple license required) including 7 channels shared with FRS Family Radio Service channels. Plus it also operates in the BRS Business Radio Service (license required). You get a full 2 watts output of clear FM UHF communications. The simple controls are easy to use. Transmit button, volume control and channel switch are all you need. All three controls may be operated without removing the radio from your belt. This is a military spec. rugged radio that can take abuse and keep working. The F21BR may be operated on 12.5 or 25 kHz wide channels. You can use the built-in signaling capability (CTCSS) to set up your own talk groups and quiet the radio when others are talking. A dual colored LED flashes to show various radio functions. Includes: BP-222N NiCad battery pack, BC-146 charger cradle, MB-103 belt clip, BC-147A AC adapter and flexible antenna. License information is included.

List $196.00 *Order #2752* **$139.95**

## IC-F21GM

- FRS/GMRS
- 15 Channels
- Privacy Codes
- CTCSS find
- CTCSS/DCS Encode
- CTCSS/DCS Decode
- MIL-STD 810 Rugged
- 4 Watts
- Drop in Charger

The **ICOM F21GM** combines **FRS** Family Radio Service *and* **GMRS** General Mobile Radio Service in one radio for more features, power and range. At 4 watts maximum power, you will get 8 times more power than standard FRS with an outdoor range of up 5 miles. You can select up to 15 channels from the GMRS and FRS channels. You can do this simple selection yourself. You can also communicate with regular FRS radios on the 7 FRS channels. A dual colored LED flashes to show various radio functions. This radio includes the BP222N NiCad, BC146 charger, MB103 belt clip, BC147A AC adapter and flexible antenna. A GMRS license is required for operation of this radio ($85.00/5 years). Complete instructions are included in the box and you can apply on-line at the F.C.C. web site (details are explained in the Owner's Manual).

List $214.00 *Order #1606* **$149.95**

Please see our on-line catalog for additional FRS/BRS/GMRS radios.
**www.universal-radio.com**

## IC-M88

- Marine
- USA/CAN/INTL Chan.
- 5 Watts
- Priority Scan
- Three power levels
- 22 Free Channels
- NOAA Weather
- MIL-STD 810 C-D-E
- JIS-7 Submersible

The **ICOM M88** offers functionality, features and unparalleled battery life and power. It is built with military ruggedness [MIL810 C-D-E] and features JIS-7 submersible construction. Its surprisingly small size that fits your hand, but boasts a full 5 watts output. Operation is simple to operate with six buttons clearly labeled on the front. It can even be operated with gloves. The large backlit LCD is very clear. The 1700 mAH Li-Ion battery provides up to 15 hours (5:5:90 Tx:Rx:Standby) of use. You get all American, Canadian and international marine channels. Plus 22 free channels for land use (146-174 MHz) (appropriate license required). The M88 supports both Priority and Normal scan modes. You also get the NOAA weather channels with auto weather scan and weather alert. Other refinements include: key lock, battery indicator, three level power output and self-check. This radio includes the BP-227 Lithium Ion battery pack, MB-86 swivel belt clip, wrist strap and BC-152 drop-in slow charger and BC147A power adapter for the BC-152.

List $475.00 *Order #0188* **$299.95**

## IC-4088

- UHF FM FRS
- 14 Channels
- Privacy Codes
- Low Battery Indicator
- Automatic Squelch
- Call Ring Function
- Smart Ring Function
- Voice Scrambling
- Auto Power Save

Family Radio Service (FRS) radios require no user license fees. The F.C.C. has set aside these frequencies for individual or group communications. The **IC-4088-15** covers all 14 FRS channels and uses the maximum legal power (500 mW ERP). Unlike most FRS radios, it is water resistant so great for hunting, hiking, biking, boating or shopping. Operates from 3 AA cells (not supplied).

**4088-15** *Order #4088* **$99.95**

The **4088-15 TC** includes the BP-209 and BC149A AC trickle charger.

**4088-15 TC** *Order #4089* **$119.95**

The **4088-15 RC** includes the BP-209 and BC119N-01 rapid charger.

**4088-15 RC** *Order #4090* **$149.95**

## Optional Accessories

| Order # | Model | Item Description | List Price | Your Price | 4088 | F21BR | F21GM | F21S | M88 |
|---|---|---|---|---|---|---|---|---|---|
| 1066 | **AD-105** | Adapter cup for BC-119N-01 | 15.00 | **13.95** | ■ | | | | |
| 0768 | **AD-98FSC** | Antenna adapter | 20.00 | **18.95** | | ■ | ■ | ■ | |
| 4562 | **BC119N-01** | Drop in Charge with AD89 cup | 65.00 | **54.95** | ■ | | | | |
| 3284 | **BC149A** | AC Wall Charger | 40.00 | **32.95** | ■ | | | | |
| 0516 | **BP-202** | NiCd 7.2V 600 mAh | 17.00 | **15.95** | ■ | | | | |
| 3182 | **BP-208N** | Battery Case (6 x AA)[3] | 18.00 | **16.95** | | ■ | ■ | ■ | |
| 3132 | **BP-209N** | NiCd 7.2V 1100 mAh[3] | 40.00 | **32.95** | | ■ | ■ | ■ | |
| 3130 | **BP-210N** | NiMH 7.2V 1650 mAh[3] | 50.00 | **42.95** | | ■ | ■ | ■ | |
| 3189 | **BP-222N** | NiCd 7.2V 600 mAh[3] | 35.00 | **26.95** | | ■ | ■ | ■ | |
| 0617 | **BP-226** | Battery Case (5 x AA) | 39.00 | **29.95** | | | | | ■ |
| 2755 | **BP-227** | Lion 7.2V 1700 mAh | 122.00 | **99.95** | | | | | ■ |
| 0498 | **CP-18A** | Cigarette Ligher Cable | 30.00 | **22.95** | ■ | | | | |
| 1165 | **HM-46** | Compact Speaker Mic | 45.00 | **32.95** | ■ | | | | |
| 2078 | **HM-46L** | Compact Speaker Mic | 45.00 | **33.95** | | ■ | ■ | ■ | |
| 3429 | **HM-75A** | Remote Speaker Mic | 70.00 | **49.95** | ■ | ■ | ■ | ■ | |
| 0564 | **HM-128** | Earphone Mic | 25.00 | **19.95** | ■ | | | | |
| 3170 | **HM-128L** | Earphone Mic | 25.00 | **19.95** | | ■ | ■ | ■ | |
| 4579 | **HM-131** | Remote Speaker Mic | 38.00 | **29.95** | ■ | | | | |
| 2178 | **HS-51** | Headset with VOX/PTT | 96.00 | **67.95** | ■ | ■ | ■ | ■ | |
| 0893 | **HS-85** | Headset with VOX/PTT | 89.00 | **64.95** | ■ | | | | |
| 4450 | **HS-94** | Earpiece Headset [1] | 24.00 | **19.95** | ■ | ■ | | | |
| 4049 | **HS-97** | Earphone with Throat Mic [1] | 40.00 | **32.95** | ■ | ■ | | | |
| 3216 | **MB-103** | Belt clip (with 2 screws) | 12.00 | **9.95** | | ■ | ■ | ■ | |
| 0940 | **SP-13** | Mono Earphone | 4.00 | **3.95** | | ■ | ■ | ■ | |
| 4448 | **VS-1** | VOX/PTT Unit [2] | 42.00 | **33.95** | ■ | ■ | | | |

[1] Requires VS-1 [2] Requires HS-94/95/97 [3] Compatible with MB-103 (not MB74).

## INTRODUCTION TO AMATEUR RADIO

Amateur radio is one of the most exciting and popular pastimes in the world. There are over one million "HAMS" operating from every end of the globe. You can "meet" a coal miner in Germany, a housewife in Australia, a missionary in India, or a research scientist in Antarctica ... all without leaving your living room.

The first Ham band starts at 1800 kHz; not far from the top end of the "AM" band. There are nine additional bands available to hams throughout the shortwave (H.F.) portion of the radio spectrum. Unlike "AM" broadcast signals, shortwave signals have the ability to consistently travel great distances. Shortwave ham signals will reflect (refract) off the invisible layer above the earth called the ionosphere. Hams operating on the amateur shortwave bands have the ability to talk all over the world. Beyond the shortwave ham bands lies an area of the radio spectrum called VHF (Very High Frequency). Hams also have special bands that they can talk on in the VHF region, UHF region and even above!

While long distance communications does occasionally take place on the VHF ham bands, these bands are usually used for local communications. Many hams have portable ("walkie-talkie") or mobile VHF radios to talk to other hams in their local area using "repeaters" to extend range. Above the VHF portion of the radio spectrum lie still higher frequencies. Hams have additional bands in this region. Hams use UHF for local contacts, transmission of TV signals, satellite communications and experimentation.

Hams use several methods to communicate with each other. When ham radio began over 60 years ago, all hams utilized Morse code. Morse remains a popular mode among amateur radio operators. Transmission by Morse code is an efficient, reliable and fun way to contact distant stations. Morse code operators use a set of standard abbreviations and procedures that virtually eliminates the language barrier. TNX FOR QSO OM ES 73 means "thank you for the contact and best wishes" in any language! Hams also operate "phone" (voice). On the shortwave bands, hams use a special transmission mode called "single side band" or SSB to transmit greater distances and more efficiently use their allocated frequencies. A third method that hams use to communicate is called radioteletype (RTTY). This mode requires extra equipment. In order to communicate by RTTY, each operator previously had RTTY equipment which roughly resembled a typewriter. Today personal computers can be adapted for RTTY work. In this mode the hams simply type their messages back and forth. A new mode called Packet permits the high speed interchange of messages, data and programs between hams. Data modes such as PSK31 can even transmit text messages during marginal conditions. Hams can even send pictures back and forth to each other over great distances! These modes are referred to as slow-scan TV (SSTV) and facsimile (FAX). But this is only the beginning! There are several special (US, Japanese and Russian) satellites circling the earth that hams can use. Hams transmit their signal into the satellite, then the satellite retransmits the signal back to earth, thus extending the "range" by a factor of 1000+! Some hams even use the moon to bounce their signals to a distant ham! The International Space Station has an amateur radio station aboard. Occasionally the *Space Shuttle* carries a crew member who is a ham. NASA lets astronaut hams take time to communicate with their earth-bound fellow hams! Imagine the excitement of talking to the *Space Shuttle* or *International Space Station* as it passes overhead!

There are many aspects of amateur radio ... truly something for everyone! Many amateurs like to experiment (or just tinker!) with various antennas or circuits, others enjoy talking to distant stations (called working "DX"). Still others prefer to communicate with other local hams or experiment with the transmission of text or pictures.

You will meet many people through amateur radio. There are hams from every walk of life and every age. Many famous people are also hams including: Walter Cronkite, Ronnie Milsap, Joe Walsh, Patti Loveless, Priscilla Presley, Gary Shandling, Marlon Brando, Chet Atkins, Tony England, Owen Garriott, Joe Rudi and Art Bell.

Amateurs do more than communicate for pleasure and relaxation. In any civil emergency, where communications are disrupted, amateur radio operators are the first on the scene with trained people and reliable communications channels both locally and to remote locations. Emergency organizations like ARES (Amateur Radio Emergency Service) are groups of ham operators who volunteer themselves and the use of their equipment for county and community emergencies. They work with the Red Cross, Disaster Services, and the Federal Emergency Management Agency as well as local health, welfare and safety agencies. Examples of recent events where hams have provided important services are: the California earthquake and hurricane Katrina. Hams also provide communications for marathons, road rallies, charity drives and similar civic activities. Amateur operators also work closely with weather bureaus to spot tornados and report severe weather.

There are over 1.6 million hams worldwide, operating from nearly every country on earth. In the U.S.A. alone there are over 700,000 amateurs. Amateur radio operators are required to obtain a license from the government before talking on the air. Getting your first amateur radio license is not difficult. Effective April 15, 2000 the license structure for new American hams became simplified and the code requirement reduced or eliminated from some licenses.

### TECHNICIAN LICENSE

The Technician Class is the entry level VHF-UHF class. This license offers great privileges and requires passing a 35 question written test. No code proficiency is required! This test is administered by qualified amateur radio clubs several times a year. When you pass this test you will be granted full use of all the VHF (and higher) ham bands in any mode ... including voice! A technician license will permit operation on the popular 144 MHz band, called 2 meters. A variety of inexpensive mobile and hand-held 2 meter radios are available. Most cities have 2 meter "repeaters" sponsored and maintained by local amateur clubs. The repeater antenna is usually on a tall building or tower. A repeater takes an input signal and then rebroadcasts it, substantially increasing the effective range of your radio! Many repeaters also have "auto-patch" capability to make phone calls from your car or walking down the street. The technician license will even allow you to operate through the new generation of ham satellites (which act like repeaters!) giving you worldwide range on VHF!

### GENERAL LICENSE

The general class "ticket" is the most popular class of license. If you already have your technician class license, a 35 question written test and a 5 word per minute code test is required. The general "ticket" dramatically expands your operating privileges! You now can operate all modes on all ham bands including voice on all the shortwave (HF) phone bands for global communications. Many hams find the privileges of the general class adequate and do not seek to upgrade to higher licenses.

### EXTRA LICENSE

There are special band segments reserved for holders of the extra class licensees. Another written 50 question exam is required for the extra class. The code requirement is now only 5 wpm.

### GETTING STARTED

There are several ways to get your first license. Universal has a variety of books to help you learn the "theory" of ham radio. Good code tapes and CDs are available to help you learn the code. Learning the code at 5 words per minute is not difficult.

Many prospective hams buy a communications receiver (or transceiver) while they are studying for their "ticket". Universal has a nice selection of new and used receivers. A good receiver may be helpful for several reasons. There is a radio station (W1AW) which transmits code practice sessions every night for those learning the code. Copying these code drills is good preparation for your code test. You will also be able to listen to other amateurs, and start to learn the "language" and "buzz-words" of ham radio. Getting your first station on the air doesn't have to be expensive! Universal has a nice selection of inexpensive used equipment. Amateur radio equipment does not require any special wiring in your home. Antennas can be large, expensive and elaborate, or simple, unobtrusive and inexpensive. Many new general class hams string up a "dipole" antenna which can be purchased for about $30. You are now ready to begin the lifetime adventure of amateur radio.

YAESU

## FT-817ND

- Dual VFOs
- VOX & RIT
- IF Shift
- 60 Meters
- 200 Memories
- CTCSS/DCS
- With NiMH Battery
- Spectrum Display

The **Yaesu FT-817ND** is a fully self-contained, battery-powered, low power amateur MF/HF/VHF/UHF transceiver for portable/camping/mountain top use. Providing coverage of the 160-10 meter amateur bands (*including* 60 meters) plus the 6 M, 2M and 70 cm bands, the FT-817 includes operation on the SSB, CW, AM, FM and digital modes. It may operate from the included FNB-85 NiMH battery, 13.8 VDC or 8 AA cells (not supplied) and provides up to 5 watts output when on external DC power (2.5 watts on cells). LCD backlight may be disabled. With MH-31A8J mic.
**Yaesu FT-817ND**
List $758.42 *Order #1817* **Call for price.**

## FT-897D

- Dual VFOs
- TCXO4
- IF Shift & Notch
- 60 Meters
- 200 Alpha Memories
- CTCSS and DCS
- Memory Keyer
- Scope

The **Yaesu FT-897D** is a multimode high-power base/mobile transceiver designed to be fitted with an internal battery (optional) for portable use. The coverage is HF 160 to 10 meters (*including* 60 meters) plus 50/144/430 MHz. Receive is 0.1-56, 76-108, 118-164 and 420-470 MHz. It is ideal for home, vacation, emergency, rescue, DX-pedition or VHF/UHF rover operation. The large multi-color display can be programmed to show different colors! This new D version includes the TCXO4 high stability oscillator. There are two antenna connectors HF/50 and 144/430. 7.9x3.2x10.3". With MH-31B8 hand mic and power cord.
List $1182.80 *Order #1897* **Call for price.**

## FT-1000MP Mark V

- Dual Receive
- Dual Blankers
- Shuttle-jog Tune
- Adjustable NB
- Tri Mode Preamps
- Collins Filters
- Enhanced DSP
- CW Keyer

The **FT-1000MP Mark-V** introduced IDBT (Interlocked Digital Bandwidth Tracking), VRF (Variable RF Front-end Filter) providing a high-Q "Preselector" system protecting the receiver's front end, Class A PA Operation, providing extraordinary SSB signal purity. 200-Watt MOS FET Final Amplifier giving you the extra drive for your linear. Integrated Shuttle Jog Control, combining the access buttons for IDBT and VRF with the convenient frequency control.
The **FT-1000MP Mark-V Field** version had 100 watts and a self contained AC power supply.
Both FT-1000 models have been discontinued. Please check our *Used Equipement Department.*

## FT-857D

- 160-2 M + 440
- Electronic Keyer
- 200 Alpha Mems
- DSP2 Included
- 100 W HF Output
- 50 W 2M Output
- 20 W 440 MHz Output
- Spectrum Display

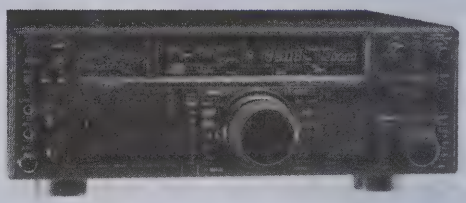
The **Yaesu FT-857D** is the worlds's smallest HF/VHF/UHF multimode amateur transceiver. But don't let the diminutive size fool you. The FT-857D is loaded with features, high power output and an outstanding receiver. It provides coverage of the 160 to 6 meter bands, *including 60 meters* plus the 144 MHz and 430 MHz bands! And look at the receive coverage: 0.1-76, 108-174 and 420-512 MHz. Refinements include: spectrum display, 32 color display, beacon mode, keyer, 200 alphanumeric memories and CTCSS. This new **D** version includes the DSP2. Includes MH31A8J hand mic.
**Yaesu FT-857D** 160-6 Meters +2M +440 MHz
List $1011.27 *Order #1857* **Call for price.**

## FT-840

- .1-30 MHz Rec.
- 100 Memories
- IF Shift
- Noise Blanker
- Adjustable RF Power
- 100 Watts Output
- Dual VFO's
- Squelch

The compact **Yaesu FT-840** has two direct digital synthesizers and rotary encoder that provide silky-smooth tuning. The excellent general coverage receiver tunes .1-30 MHz in 10 Hz steps. The FT-840 uses a die-cast RF power amp with thermally switched fan to ensure full power output (up to 100 watts). The digitally synthesized local signals ensure clean, low-noise transmitter output on all HF amateur bands. Other features include IF shift, reverse CW, dual VFOs, 100 memories, attenuator, noise blanker, meter, scan modes and speech processor. 9.5x3.7x9.7". With hand mic
The FT-840 has recently been discontinued. Please check our *Used Equipement Department.*

## FT-2000



- 160-6 Meters
- Electronic Keyer
- VRF Preselector
- Dual Receive
- 100 Watt version
- 200 Watt version
- First IF Roofing Filters
- Analog Meter

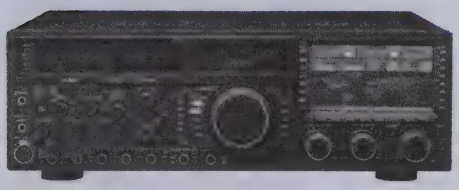
The **Yaesu FT-2000** follows in the tradition of venerable FT-1000 series, and incorporates an amazing number of advanced features from the FT-9000 series. Covering 160 through 6 meters, this transceiver will be available in two configurations: a 100 watt version with internal power supply and a 200 watt version with external power supply. The receiver front-end includes a Variable RF Tuning preselector which works in conjunction with a bank of fixed bandpass filters. This provides a front-line defense against strong out of band signals. The result is improved dynamic range and a higher intercept point. The First IF roofing filters (3/6/15 kHz) increase dynamic range in crowded band conditions. Dual receive is supported even within the same band. There is an external display port for viewing of RF and audio with optional DMU2000 Data Management Unit and monitor.
**Yaesu FT-2000** 160-6 Meters 100 watts
T.B.A. *Order #0215* **Call for price.**
**Yaesu FT-2000** 160-6 Meters 200 watts
T.B.A. *Order #0216* **Call for price.**

## USED AMATEUR RADIOS

Universal Radio carries previously owned amateur and shortwave radios available at a substantial discount over new. Our used department is also a good source for classic collector models. Our website used list contains the models currently available with photographs of most entries. There is also an informative photo-archive of recently sold used radios. Universal Radio takes most amateur radios in on trade. Additionally we also purchase used radios. Contact Universal if you have a radio you wish to sell or trade.
**email: dx@universal-radio.com** **website: www.universal-radio.com**

# YAESU

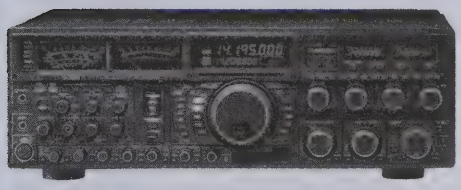
## FTDX9000D



The **Yaesu FTDX9000** is available in three configurations including a 200 and 400 watt versions. Flash memory and keyboard connector ensure that your station will evolve as the FT-DX9000 does. Receiver highlights include: selectable roofing filters and a typical IP3 in excess of +40 dBm, 32-Bit IF DSP with adjustable filter response contours, variable bandwidth, variable passband center, noise reduction and IF Manual notch. You get true dual receive with identical receivers for Main and Sub. You can watch the band with a fast acting spectrum display (D version) with variable frequency range. Transmitter highlights include: both 200 and 400 watt versions, Class-A operation at 100 watts (75 watts with the 200 watt version), IF DSP speech processing and microphone equalization and monitor for voice data and CW modes. There is a low level transverter output port. Other refinements include: flash memory port, PS/2 keyboard input, PC data port, direct frequency entry, analog meters, and rotor interface jack for direction indication on the TFT display (D version only). The rear panel features four TX/RX antenna jacks plus two RX-only jacks. The Yaesu FTDX9000D deluxe version features 200 watts, built-in memory board, main & sub receiver VRF, full dual receive, internal power supply.

*Order #0900* **Call for price.**

## FTDX9000MP



The **Yaesu FTDX9000MP** boosts an incredible 400 watts output, dual analog meter sets, LCD display, memory card installed, main and sub receiver VRF, full dual receive, external power supply with twin speaker enclosure.

*Order #0442* **Call for price.**

## FTDX9000 Contest

The **Yaesu FTDX9000 Contest** version features 200 watts, dual meters & LCD, VRF installed in main receiver, extra key and headphone jacks. This version has an internal power supply. Please visit our website for more FTDX9000 information.

*Order #4377* **Call for price.**

# YAESU

## Accessories

| Order # | Model | Item Description | List Price | Your Price | FT-1000MPV | FT-817/ND | FT-840 | FT-847 | FT-2000 | FT-857/D | FT-897/D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4632 | ADMS-4A | Windows CD and ser. cable | 69.00 | 52.95 | | ■ | | | | | |
| 4633 | ADMS-4B | Windows CD and ser. cable | 69.00 | 52.95 | | | | | | ■ | ■ |
| 4044 | ATAS-25 | Portable manual Antenna | 299.95 | 229.95 | | ■ | | ■ | | ■ | ■ |
| 4547 | ATAS-120 | Mobile Antenna | 462.00 | 359.95 | | | | ■ | | ■ | ■ |
| 3804 | ATBK-100 | VHF/UHF Base for ATAS120 | 114.22 | 89.95 | | | | ■ | | ■ | ■ |
| 2704 | Base Kit | Base Kit for µ-Tuning Units | T.B.A. | T.B.A. | | | | | ■ | | |
| 1615 | CD-24 | Charge adapter for FNB-78 | 164.27 | 119.95 | | | | | | | ■ |
| 2298 | CSC-83 | Soft carry case | 32.00 | 24.95 | | ■ | | | | | |
| 0379 | CT-39A | Packet Cable | 11.55 | 8.95 | | ■ | | | | ■ | ■ |
| 3821 | CT-58 | VL1000 Band Data Cable | 37.22 | 29.95 | | | | | | ■ | ■ |
| 3822 | CT-62 | Packet Cable | 37.22 | 29.95 | | ■ | | | | ■ | ■ |
| 4762 | DMU-2000 | Data Management Unit | T.B.A. | T.B.A. | | | | | ■ | | |
| 3199 | DVS-2 | Digital Voice Recorder | 305.43 | 229.95 | ■ | | | | | | |
| 3153 | FBA-28 | Cell Holder (8xAA) | 17.00 | 14.95 | | ■ | | | | | |
| 0322 | FIF-232C | RS-232C Interface Unit | 128.00 | 99.95 | | | ■ | | | | |
| 1663 | FC-10 | Automatic Tuner | 550.55 | 399.95 | | | ■ | | | | |
| 0582 | FC-20 | External Auto Antenna Tuner | 383.72 | 299.95 | | | | ■ | | | |
| 4540 | FC-30 | External Auto Antenna Tuner | 230.00 | 199.95 | | | | | | ■ | ■ |
| 0643 | FC-40 | External Auto Antenna Tuner | 400.00 | 299.95 | | | | | | ■ | ■ |
| 0240 | FC-800 | Ext. Remote Ant. Tuner | 708.00 | 498.98 | | | ■ | | | | |
| 1262 | FH-1 | Wired Remote Keypad | 112.93 | 89.95 | ■ | | | | | | |
| 2622 | FH-2 | Wired Remote Keypad | T.B.A. | T.B.A. | | | | | ■ | | |
| 4220 | FM747 | FM Mode Unit | 79.57 | 64.95 | | | ■ | | | | |
| 4542 | FNB-78 | NiCd 13V 4500 ma Battery | 164.27 | 124.95 | | | | | | | ■ |
| 0874 | FNB-85 | NiMH 9V 1400 ma Battery | 79.00 | 59.95 | | ■ | | | | | |
| 4543 | FP-30 | Internal Power Supply | 295.17 | 219.95 | | | | | | | ■ |
| 3631 | FP-1023A | Power Supply 23A | 216.88 | 169.95 | | | ■ | ■ | | ■ | ■ |
| 3640 | FP-1030A | Power Supply 25A Meters | 345.22 | 269.95 | | | ■ | ■ | | ■ | ■ |
| 0287 | MD-100A8X | Desk Top Microphone | 186.00 | 139.95 | ■ | | ■ | ■ | | | |
| 1359 | MD-200A8X | Desk Top Microphone | 539.00 | 399.95 | ■ | | ■ | ■ | | | |
| 0413 | MH-31B8 | Hand Held Microphone | 50.05 | 39.95 | ■ | | ■ | | | | |
| 1918 | MH-36D8 | Hand Held Microphone | 77.00 | 59.95 | | | | ■ | | | |
| 0420 | MH-36E8J | DTMF Hand Held Microphone | 77.00 | 59.95 | | | | | | ■ | ■ |
| 4414 | MH-59A8J | DTMF Hand Held Microphone | 82.13 | 62.95 | | | | | | ■ | ■[3] |
| 2680 | MMB-80 | Mobile Mounting Bracket | 44.92 | 34.95 | | | | | | | ■ |
| 2639 | MTU-160 | Ext. µ-Tuning Unit 160m | T.B.A. | T.B.A. | | | | | ■[1] | | |
| 2641 | MTU-80/40 | Ext. µ-Tuning Unit 80/40m | T.B.A. | T.B.A. | | | | | ■[1] | | |
| 2644 | MTU-30/20 | Ext. µ-Tuning Unit 30/20m | T.B.A. | T.B.A. | | | | | ■[1] | | |
| 3771 | NC-72B | NiCad Battery Charger | 24.00 | 18.95 | | ■ | | | | | |
| 4544 | PA-26B | Charger for FNB-78 | 109.08 | 79.95 | | | | | | | ■ |
| 1789 | SP-8 | Speaker with Audio Filter | 234.00 | 189.95 | ■ | | | | | | |
| 2604 | SP-2000 | Speaker with Audio Filter | T.B.A. | T.B.A. | | | | | ■ | | |
| 1301 | SP-9000 | Speaker with Audio Filter | 460.00 | 339.95 | | | | | | | |
| 3176 | TCXO-4 | High Stab. Osc. <±2 ppm | 134.00 | 99.95 | | | ■ | | | | |
| 0588 | TCXO-6 | High Stab. Osc. <±.5 ppm | 243.83 | 189.95 | ■ | | | | | | |
| 2187 | TCXO-9 | High Stab. Osc. <±.5 ppm | 127.05 | 99.95 | | ■ | | | | ■ | ■ |
| 3178 | YF-110CN | 250 Hz Filter (3rd IF) | 201.48 | 159.95 | ■ | | | | | | |
| 0758 | YF-110SN | 2.0 kHz Filter (3rd IF) | 201.48 | 159.95 | ■ | | | | | | |
| 2869 | YF-114CN | 250 Hz Filter (2nd IF) | 201.48 | 159.95 | ■ | | | | | | |
| 1681 | YF-114SN | 2.0 kHz Filter (2nd IF) | 201.48 | 159.95 | ■ | | | | | | |
| 1551 | YF-112A | 6.0 kHz AM Filter | 162.98 | 129.95 | | | ■ | | | | |
| 1914 | YF-112C | 500 Hz CW Filter | 162.98 | 129.95 | | | ■ | | | | |
| 2194 | YF-115C | 500 Hz CW Filter | 222.02 | 169.95 | ■ | | | ■ | | | |
| 0000 | YF-115S-2 | 2.4 kHz SSB Filter | Discontinued | | | | | ■ | | | |
| 1255 | YF-122C | 500 Hz CW Collins Filter | 222.02 | 169.95 | | ■ | | | ■[2] | ■ | ■ |
| 4188 | YF-122CN | 300 Hz CW Collins Filter | 222.02 | 169.95 | | ■ | | | ■[2] | ■ | |
| 0803 | YF-122S | 2.3 kHz SSB Collins Filter | 222.02 | 169.95 | | ■ | | | | ■ | ■ |
| 2342 | YH-77STA | Stereo Headphones (pg. 31) | 68.00 | 49.95 | ■ | | ■ | ■ | | | |
| 3847 | YSK-857 | Head separation kit (19.6 ft.) | 69.30 | 51.95 | | | | | | ■ | |

[1]Requires optional Base Kit [2]For sub-receiver [3]Only for D version

## VIEW ACCESSORIES

We do not have space in our catalog to illustrate accessory items but they may be viewed on our website at: **www.universal-radio.com**

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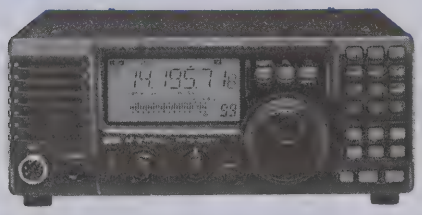
ICOM

## IC-718



The **IC-718** covers 160-10 meters and features IF Shift, Adjustable Noise Blanker and optional DSP (UT-106). You get 99 regular memories and 2 scan edge memories. The transmit section features microphone compression and you get 5 to 100 watts of all mode output (4 to 40 watts AM). A Morse keyer is built-in. The meter shows output power, ALC and VSWR. Operating HF has never been easier. Requires 12 VDC at 20 amps. With HM-36 hand mic. The UT106 DSP unit is now factory installed. 9.67x3.8x9.5 inches 8.4 Lbs.

- 180-10 Meters
- 101 Memories
- RIT
- Noise Blanker
- VOX Function
- IF Shift
- Auto Notch
- 10 Hz Readout
- UT-106 DSP standard
- Full Break-in CW
- RF Attenuator
- CW Keyer
- Front Firing Speaker
- 100 W CW/SSB Output
- 40 W AM Output
- Digital S/RF Meter

**Icom 718** 160-10 Meters 12 VDC
List $736.00 *Order #0718* **Call for price.**

## IC-746 Pro

The **Icom IC-746** Pro covers 160-10 meters plus 6 and 2 meters with100 watts on all bands. The new Pro version features 32 bit floating point DSP and 24-bit AD/DA converter. This provides ultra wide dynamic range and good third order intercept point. And there are no expensive optional filters. You get a Baudot RTTY demodulator,100 alphanumeric memories, spectrum display, digital twin PBT, CTCSS encode/decode, APF, two stage preamp and electronic keyer. A built-in automatic tuner operates on the HF bands plus 6 meters. With HM-36 hand mic. 11.3x4.8x12.5". 20 Lbs.

- CW/SSB Sync
- 102 Memories
- RIT/XIT
- Noise Blanker
- VOX Function
- Twin PBT
- Squelch
- Dual Display
- 100 W Output
- HF+6 Auto Ant Tuner
- Full Break-in CW
- Spectrum Display
- 100% Duty Cycle
- Rx Antenna Jack
- Encode/Decode
- 1 Hz Readout
- Memory Keyer
- RF Atten. 6/12/18 dB

**Icom 746 Pro** 160-10 Meters +6M +2M 12 VDC
List $2264.00 *Order #0074* **Call for price.**

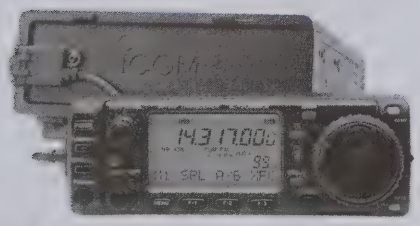
## IC-756 Pro III

The model **756 Pro III** covers all nine HF ham bands plus 6 meters (Rx from 30 kHz - 60 MHz). The high resolution 5" TFT color display provides more operating information than you've ever had before, including a spectrum scope (±12.5, ±25, ±50 or ±100 kHz). The 32 bit floating point DSP digitally transposes transmit and receive audio components to produce desired AF frequency characteristics at the IF stage and, in addition, performs: noise reduction, automatic notch, PSN modulation/demodulation and selectable APF. Twin PBT knocks out QRM. With hand mic.

- 5" TFT Color
- 101 Memories
- RIT/XIT
- ±0.5 Stability
- VOX Function
- RTTY Demod
- Digital Noise F.
- Dual Watch
- 100 W Output
- Built-in Auto Ant Tuner
- Full Break-in CW
- Spectrum Display
- Memory Pad
- 32 bit DSP
- Twin Digital PBT
- 1 Hz Readout
- 4 Ch. Memory Keyer
- Digital/Analog Meters

**Icom 756 Pro III** 160-6 Meters 12 VDC
List $3676.00 *Order #3756* **Call for price.**

## IC-706 Mark II G



The **IC-706 Mark IIG** is the most popular amateur transceiver in the world. This incredibly small all-mode transceiver provides 100 watts on HF and 6 meters and 50 watts on 2 meters plus 20 watts on 440 MHz. It receives from 30 kHz to 200 MHz and 400 to 470 MHz. It features a removable, remoteable, front panel that allows control of all features. The large LCD display features alphanumeric memory names and soft key descriptions. Despite its compact size (6.56" x 2.28" x 7.88"), it has big, easy to use control dials. With hand mic. Requires 12 VDC at 20 amps.

- .3-150 MHz Rx.
- Alpha memories
- RIT/SHIFT
- Preamp/ATT
- VFO A/B
- 1 Hz Display
- IF Shift
- Scanning
- S/RF Meter
- 100 W HF+6 M
- 50 W 2 M
- 20 W 440 MHz
- All band Multimode
- Removable head
- Preamp/RF Atten.
- Mini Spectrum Scope
- Electronic Keyer
- 100 Memories

**Icom 706 Mk IIG** 160-10 Meters +6M +2M +440
List $1174.00 *Order #3450* **Call for price.**

## IC-703 Plus

The feature packed **Icom 703-Plus** all-mode transceiver provides efficient 10 watt QRP operation on HF and 6 meters. Output can be set for 10, 5, 2.5, 1 or 0.5 watts. Energy conservation is realized by lowering the power source voltage to 6 VDC. Many features, usually extra charge, are built-in including: automatic antenna tuner, AF DSP, Memory keyer and TCXO. Other features include IF shift, AF speech compressor, band scope, and SWR indication. With hand mic. (The earlier non-plus version did not include 6 meters).

- RIT/SHIFT
- Preamp/ATT
- VFO A/B
- 1 Hz Display
- IF Shift
- Scanning
- S/RF Meter
- Large LCD
- Auto Notch & NR
- SWR Analyzer
- Menu Configurable
- Antenna Tuner
- Mini Spectrum Scope
- Electronic Keyer
- 105 Memories
- Speech Compression

**Icom 703 *Plus*** 160-6 Meters QRP Transceiver
List $919.99 *Order #0703* **Call for price.**

| Model | Rx Freq Range | Conversion | HF Sensitivity | Selectivity -6dB | Audio | Memories | Transmit Power | Required P.S. Current | |
|---|---|---|---|---|---|---|---|---|---|
| IC-718 | .03-30 MHz | Double | < .16 µV | 6 / 2.1 kHz | 2.0 W | 101 | 100 watts output | 12 VDC | 20 A |
| IC-746PRO | .3-60 & 108-174 | Quadruple | < .16 µV | DSP | 2.0 W | 102 | 100 watts output | 12 VDC | 23 A |
| IC-756PRO | .3-60 MHz | Triple | < .15 µV | DSP | 2.0 W | 101 | 100 watts output | 12 VDC | 23 A |
| IC-706MKII | .5-30 & 2, 6m,440 | Double/Triple | < .16 µV | 6 / 2.3 kHz [15 FM] | 2.0 W | 100 | 100 watts (50/20W) | 12 VDC | 20 A |
| IC-703+ | .3-60 MHz | Double | < .16 µV | 8 / 2.4 kHz [8/12 FM] | 1.0 W | 105 | 10 watts output | 12 VDC | 2 A |

ICOM

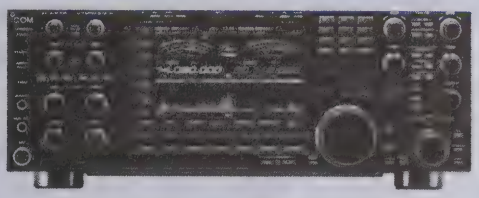
## Optional Accessories

| Order # | Model | Item Description | List Price | Your Price | IC-756 ProII | IC-746 Pro | IC-706 | IC-718 | IC-703 | IC-7000 | IC-7800 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2606 | AH-2b | Mobile Antenna | $379.00 | $329.95 | ■ | ■ | ■ | ■ | ■ | | |
| 3702 | AH-4 | Mobile HF+6M Auto Tuner | 288.00 | 279.95 | ■ | ■ | ■ | ■ | ■ | ■ | |
| 3438 | AT-180 | HF+6M Auto Antenna Tuner | 424.00 | 389.95 | | | ■ | ■ | ■ | ■ | |
| 2230 | BC-155A | Battery charger for BP-228 | 29.00 | 23.95 | | | | | ■ | | |
| 4585 | BP-228 | Ext. battery pack 9V 2800 mAH | 89.00 | 69.95 | | | | | ■ | | |
| 2137 | CR-282 | High Stability Crystal ±0.5 ppm | 168.00 | 129.95 | | | ■ | | | | |
| 2777 | CR-338 | High Stability Crystal ±0.5 ppm | 81.00 | 64.95 | | ■ | | ■ | | | |
| 2771 | CT-17 | CI-V Level Converter | 169.00 | 129.95 | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 0903 | FL-52A | 500 Hz CW Filter 455 kHz | 245.00 | 179.95 | | | | ■ | ■ | | |
| 0909 | FL-53A | 250 Hz CW Filter 455 kHz | 245.00 | 179.95 | | | | ■ | ■ | | |
| 0000 | FL-96 | 2.8 kHz SSB Filter 455 kHz | Discontinued | | | | ■ | | | | |
| 2968 | FL-100 | 500 Hz CW Filter 9 MHz | 133.00 | 99.95 | | | ■ | | | | |
| 2999 | FL-101 | 250 Hz CW Filter 9 MHz | 133.00 | 99.95 | | | ■ | | | | |
| 1433 | FL-103 | 2.8 kHz SSB Filter 9 MHz | 123.00 | 94.95 | | | ■ | | | | |
| 0327 | FL-222 | 1.9 kHz SSB Filter 455 kHz | 249.00 | 179.95 | | | | ■ | ■ | | |
| 2312 | FL-223 | 1.9 kHz SSB Filter 9 MHz | 105.00 | 79.95 | | | ■ | | | | |
| 2712 | FL-232 | 350 Hz CW Filter 9 MHz | 113.00 | 89.95 | | | ■ | | | | |
| 3288 | FL-257 | 3.3 kHz SSB Filter 455 kHz | 225.00 | 169.95 | | | | ■ | ■ | | |
| 1951 | HM-36 | Hand Mic with Up / Down | 74.00 | 56.95 | | ■ | | ■ | | | ■ |
| 3430 | HM-103 | Hand Mic with Up / Down | 74.00 | 55.95 | | | | | ■ | | |
| 3290 | HM-154T | DTMF Hand Mic with Up / Down | 75.00 | 58.95 | | | ■ | | | | ■ |
| 1168 | LC-156 | Back pack carry case | 99.00 | 69.95 | | | ■ | | ■ | | |
| 3431 | MB-62 | Mobile Mounting Bracket | 25.00 | 18.95 | | | ■ | | ■ | ■ | |
| 3432 | MB-63 | Mobile Bracket for Head Only | 18.00 | 12.95 | | | ■ | | ■ | | |
| 2340 | MB-65 | Mobile Bracket for MB-63 | 35.00 | 27.95 | | | ■ | | ■ | ■[3] | |
| 1178 | MB-72 | Carrying Handle | 14.00 | 10.95 | | | ■ | | ■ | | |
| 0308 | MB-105 | Controller Mounting Bracket | 20.00 | 18.95 | | | | | | ■ | |
| 0286 | MB-106 | Carrying Handle | 20.00 | 18.95 | | | | | | ■ | |
| 3434 | OPC-581 | Separation Cable 11.5 Ft. (3.5M) | 60.00 | 43.95 | | | ■ | | ■ | | |
| 3435 | OPC-587 | Separation Cable 16.4 Ft. (5.0M) | 79.00 | 58.95 | | | ■ | | ■ | | |
| 1120 | OPC-589 | Adapter (8 pin to modular mic) | 35.00 | 25.95 | | | ■ | | ■ | ■ | |
| 3436 | OPC-599 | Adapter (7+8 pin to 13 pin acc) | 60.00 | 44.95 | | | ■ | ■ | ■ | ■ | |
| 0133 | OPC-1248 | Power cord adapter to PS-85/125 | 15.00 | 11.95 | | | | | ■ | | |
| 0235 | OPC-1443 | Separation Cable 11.5 Ft. (3.5M) | 60.00 | 44.95 | | | | | | ■ | |
| 0195 | OPC-1444 | Separation Cable 16.4 Ft. (5.0M) | 80.00 | 59.95 | | | | | | ■ | |
| 1196 | OPC-1457 | DC Power Cable | 24.00 | 21.95 | | | | | | ■ | |
| 2694 | PS-125 | Power Supply 13.8V at 22A | 406.00 | 289.95 | ■ | ■ | ■ | ■ | ■[2] | ■ | |
| 4121 | RMK-706 | Remote Kit (MB62/63, OPC581) | 70.00 | 54.95 | | | ■ | | | | |
| 1403 | RMK-7000 | Remote Kit (MB62/105, OPC1443) | 95.00 | 73.95 | | | | | | ■ | |
| 2561 | SM-20 | Desk Microphone With Up/Down | 259.00 | 179.95 | ■ | ■ | ■[1] | ■ | ■[1] | ■[1] | ■ |
| 1866 | SP-10 | External Speaker Mobile | 69.00 | 54.95 | | | ■ | | ■ | ■ | |
| 1672 | SP-20 | External Speaker with Filters | 310.00 | 219.95 | ■ | ■ | | ■ | | | ■ |
| 1696 | SP-23 | External Speaker with Filters | 225.00 | 169.95 | ■ | ■ | | ■ | | | ■ |
| 3437 | UT-102 | Voice Synthesizer Unit | 74.00 | 59.95 | ■ | ■ | ■ | ■ | ■ | | |
| 3097 | UT-106 | DSP NR/Notch | 166.00 | 139.95 | | | | ■[4] | | | |

[1]Requires OPC-589 [2]Requires OPC-1248 [3]Requires MB-105 [4]Standard on current production.

ICOM

## IC-7800



- 200W Output
- +40dBm I.P.
- Dual Receive
- Spectrum Scope
- Automatic Tuner
- Digital Voice Recorder
- High Stability OCXO
- 7" Dia. Color TFT
- Voice Synthesizer
- RTTY/PSK31 Demod

Icom has been developing radio communication equipment for over forty years. Icom's history has been technical challenge and excellence from the first analog PLL circuit in the IC-200, to the ground-breaking 32-bit floating point DSP of the IC-756PRO. Icom has always given shape to ideas with this technical accumulation. Recent ham radio stations increasingly use high power and high gain antennas that raise the field strength of unintended signals, and thus require a wider receiver dynamic range. Icom has developed the new flagship model **IC-7800** which is a fusion of forty years analog RF circuit development expertise, with cutting edge digital technology. The result is 110dB dynamic range, +40dB 3rd order intercept point in HF bands and other phenomenal performance features. The receiver combines various current and new technology, to obtain the +40dBm IP3, a specification never before achieved in ham radio. Quite simply put, the IC-7800 is the ultimate amateur transceiver. The 7800 comes with: 64 Mb compact flash card, AC cord and rack mount handles. (Mic not supplied). Now shipping with factory installed v2 roofing filter upgrade. Call for current pricing.

**Icom 7800v2** 160-6 Meters 120 VAC
List $13466.65 *Order #0041* **Please Call**

## IC-910H

The **Icom IC-910H** VHF/UHF multi-mode radio provides full 100 watts of power on VHF and 75 watts on UHF. Add the optional UX-910 module to enjoy the 1.2 GHz band with 1 or 10 watts. With dual high sensitivity DSP compatible receivers, weak signal DX and satellite communications are second to none. Optional UT-106 DSP units can be added to both bands for noise reduction and improved S/N ratio. You also get: two data sockets for simultaneous packet operation on the main and sub bands plus a 3.5" diagonal display. Ten key entry pad, direct frequency or memory channel control are at your fingertips. Includes HM-12 hand mic. See page 61 for accessories.
List $1638.00 *Order #1910* **Please Call**

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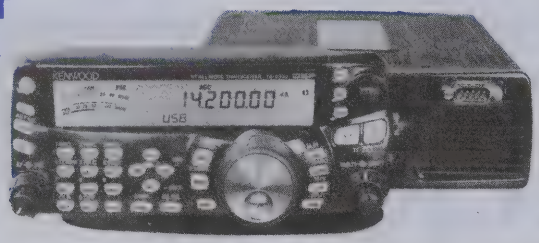
## IC-7000

The **Icom IC-7000** represents the next generation in all-mode HF/VHF/UHF mobiles. DSP at the IF level is the cornerstone of this impressive new multi-bander. Enjoy 41 bandwidths with sharp or soft filter shape. And variable twin PBT allows you to either narrow the IF passband, or shift the entire passband to eliminate QRM. This radio is also downright gorgeous. The 2.5 inch (diagonal) color TFT presents numbers and indicators in bright, concentrated colors. The display also supports a two-mode band scope. Eight of the most-used radio functions are controlled by dedicated function keys grouped around the display for easy visibility. One quick touch turns the function on and off. A longer touch activates adjustment of the function's setting. Other features include: memory keyer, detachable control head (with optional OPC-1443/1444 separation cable), 503 memories, S/PWR/SWR meter, RIT, Preamp, Attenuator, adjustable SSB bandwidth, DTMF memory, NTSC output, VOX, full break-in and adjustable CW pitch.

**Icom 7000** 160-10 Meters +6M +2M +440
List $1816.00 *Order #0700* **Please Call**

# KENWOOD

## TS-480SAT
## TS-480HX



- 160-6 Meters
- AF DSP
- Multiple Scan
- 100 Alpha Mem.
- Memory Keyer
- Wide-Narrow Dev
- Remote Head
- 10 Hz Tuning
- Multi Scan
- 1750 Hz Tone
- Dual VFO Display
- Opt. Voice Synth.

The **Kenwood TS-480SAT** is an all mode HF plus 6 meter amateur transceiver. It features AF digital signal processing on both receive and transmit. A quad-mixer provides receiver dynamic range equivalent to that of the TS-950 class. Receive coverage is 500 kHz (30 kHz VFO) to 60 MHz and direct frequency keypad entry is supported. The stand-alone LCD control panel features its own speaker and can be placed up to 16 feet away from the main unit. The supplied tabletop panel bracket is convenient for base use. 100 Alphanumeric memories are available and multiple scan functions are supported including: program scan, VFO scan, memory scan, group scan, subtone scan and CTCSS scan. The TS-480SAT can transmit 100 watts (5 watt minimum RF output for QRP work). Many operational parameters can be set to your operating preferences via the menu system.
Note: The **TS-480HX** is similar, but provides 200 watts (100 on 6 meters) and does *not* have the built-in antenna tuner.

**Kenwood TS-480HX** 160-6 Meters 200W [no AT]
List $1659.00 *Order #2480* **Please Call**

**Kenwood TS-480SAT** 160-6 Meters 100W + AT
List $1511.00 *Order #0480* **Please Call**

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**1 800 431-3939**

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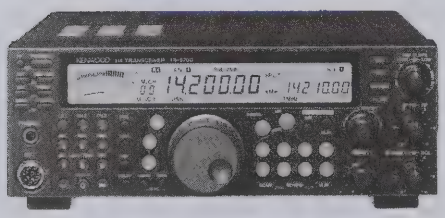
**www.universal-radio.com**

## TS-50S

The **Kenwood TS-50S** has recently been discontinued, but some accessories are still available and are shown on the following page.

## TS-570DG/SG



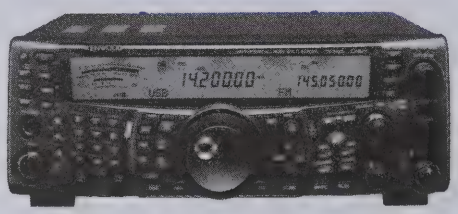
- 160-10 Meters
- Electronic Keyer
- 100 Memories
- 5~100W Output
- 16 Bit DSP
- CW Auto Tune
- Full and Semi Break-In
- 10 Hz Tuning

The **Kenwood TS-570 G** series provides 16-bit DSP technology for superb audio, noise reduction, equalization and slope tuning. Power output can be set from 5 to 100 watts. A preset auto antenna tuner and electronic keyer are built in. The menu system offers 46 types of functions for novice through extra. You also get: Full and semi break-in, dedicated packet port, PC control, keypad entry, 100 memories, IF shift and CW Auto Tune. The **"G" Series** adds: TX sound monitor, new DSP CW filters, dual beat cancel, NR1 9-step noise reduction system, CW manual weight adjustment and more! Only one optional filter may be installed. The MC-43S hand mic is included.

**Kenwood TS-570DG** 160-10 Meters 12 VDC
List $1214.00 *Order #0570* **Please Call**

The TS-570SG includes coverage of **6 meters**.
**Kenwood TS-570SG** 160-6 Meters 12 VDC
List $1416.00 *Order #2519* **Please Call**

## TS-2000/TS-2000X



- High Stability
- HF-6M Tuner
- Dual Receive
- Backlit Panel
- IF DSP Main Band
- AF DSP Sub Band
- CTCSS/DCS
- Built-in Packet TNC

The **Kenwood TS-2000** is an all band HF/VHF/UHF transceiver with exceptional features and versatility. Wide band Main HF reception includes: 30 kHz-60 MHz. On VHF you get: 142-152, 420-450 and 1240-1300 MHz (optional). Sub band (AM/FM modes only) reception includes: 118-174, 220-512 MHz. Output is 100 watts on HF, 6 meters and 2 meters, 50 watts for 440 MHz and optionally 10 watts for 1200 MHz (if UT-20 installed). The TS-2000 includes advanced features such as: IF DSP on main band, AF DSP on sub band, built-in tuner (1.9-54 MHz), built-in keyer with 3 memories, high stability TCXO, 300 memories (290 are alpha.) and built-in TNC.
**Kenwood TS-2000** 160-10 Meters +VHF/UHF
List $2186.00 *Order #1978* **Please Call**

The Kenwood TS-2000X is a special version with the UT-20 1.2 GHz option factory installed.
**Kenwood TS-2000X** 160-10M+VHF/UHF +1.2GHz
List $2835.00 *Order #2797* **Please Call**

## TS-B2000

The **Kenwood TS-B2000** is a 'silver box' version of the TS-2000. It is designed for computer operation with the supplied ARCP-2000 Radio Control program. Or it is suitable for mobile use with the optional RC-2000 Mobile Controller Kit.
List $1958.00 *Order #1937* **Please Call**

## RC2000

The optional **Kenwood RC-2000** Mobile Controller kit includes: DC cable (23.1foot), microphone extension cable (16.5 foot), speaker extension cable (16.5 foot), RC2000 head cable (16.5 foot), RC2000 mounting bracket, TS2000/B2000 mounting bracket plus filters for the microphone and speaker lines and hardware.
List $419.00 *Order #2687* **$339.95**

The **Kenwood TS-2000 Limited Edition**, *60th Anniversary* model features a black cabinet. This special version *includes* the VS-3, DRU-3A and ARCP-2000 factory installed. Only 300 in the U.S.
*Order #4801* **Please Call**

| Model | Rx Range | Conversion | HF Sensitivity | Selectivity -6dB | Notch Att. | Audio | Memories | Transmit Power | Required P.S. | Current |
|---|---|---|---|---|---|---|---|---|---|---|
| TS-570DG | .1-30 MHz | Triple | < .20 µV | >4 / >2.2 [12 FM] kHz | N / A | 1.5 W | 100 | 100 watts PEP output | 12 VDC | 20.5 A |
| TS-570SG | .1-60 MHz | Triple | < .20 µV | >4 / >2.2 [12 FM] kHz | N / A | 1.5 W | 100 | 100 watts PEP output | 12 VDC | 20.5 A |
| TS-50S | .5-30 MHz | Double | < .25 µV | >5 / >2.2 [12 FM] kHz | N / A | 2.0 W | 100 | 100 watts PEP output | 12 VDC | 20.5 A |
| TS-480SAT | .5-60 MHz | Triple | < .20 µV | >5 / >2.4 [12 FM] kHz | N / A | 2.0 W | 100 | 100 watts PEP output | 12 VDC | 20.5 A |

# KENWOOD

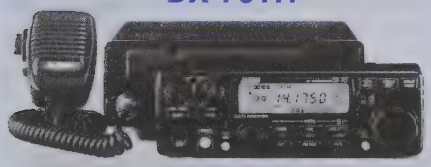
## Optional Accessories

| Order # | Model | Item Description | List Price | Your Price | TS-570D/S | TS-2000/X/B | TS-480SAT/HX | TS-50S |
|---|---|---|---|---|---|---|---|---|
| 3296 | ARCP2000 | Radio Control Program | $90.00 | $79.95 | | ■ | | |
| 2195 | DRU-3A | Digital Recorder | 152.00 | 129.95 | ■ | ■ | | |
| 0357 | HS-5 | Deluxe Headphones | 87.00 | 74.95 | ■ | ■ | ■ | |
| 0358 | HS-6 | Lightweight Headphones | 65.00 | 59.95 | ■ | ■ | ■ | |
| 4273 | KPS-15 | Switching Supply 13V at 23 A | 144.00 | 119.95 | ■ | ■ | | ■ |
| 1724 | LF-30A | Low Pass Filter 1KW | 71.00 | 62.95 | ■ | ■ | ■[1] | ■ |
| 0248 | MB-430M2 | Mobile Mounting Bracket | 55.00 | 45.95 | ■ | ■ | | |
| 1380 | MB-480 | Portable Mounting Bracket & Handle | 51.00 | 44.95 | | | ■ | |
| 0230 | MC-43S | Hand Mic With Up/Down 8 Pin | 65.00 | 56.95 | ■ | ■ | ■[3] | ■ |
| 0368 | MC-60A | Deluxe Desktop Mic With Preamp | 174.00 | 149.95 | ■ | ■ | ■[3] | ■ |
| 1870 | MC-90 | DSP Compatible Desktop Mic | 290.00 | 249.95 | ■ | ■ | | |
| 1539 | MJ-88 | Modular to 8 pin mic adapter | 35.00 | 29.95 | | | ■ | |
| 4143 | PG-2Y | DC Power Cable 13 foot | 44.00 | 39.95 | ■ | ■ | | ■ |
| 0391 | PG-2Z | DC Power Cable 6 foot | 42.00 | 36.95 | ■ | ■ | | ■ |
| 2965 | PG-4Z | Panel Extension Cable 13 foot | 62.00 | 53.95 | | | ■ | |
| 2816 | PS-53 | HD Power Supply 13V at 22 A | 323.00 | 269.95 | ■ | ■ | ■[2] | ■ |
| 2687 | RC-2000 | Mobile Controller | 419.00 | 339.95 | | ■ | | |
| 1597 | SO-2 | High Stability TCXO | 206.00 | 179.95 | ■ | | | ■ |
| 3015 | SO-3 | High Stability TCXO | 129.00 | 119.95 | | | ■ | |
| 0692 | SP-23 | External Speaker | 99.00 | 83.95 | ■ | ■ | ■ | |
| 1349 | SP-50B | Mobile Speaker | 61.00 | 52.95 | ■ | ■ | ■ | ■ |
| 2949 | VGS-1 | Voice Guide Synthz/Memory | 73.00 | 62.95 | | | ■ | |
| 2702 | VS-3 | Voice Synthesizer | 44.00 | 36.95 | ■ | ■ | | |
| 3002 | YF-107C | 500 Hz CW Filter | 145.00 | 124.95 | | | ■ | |
| 2981 | YF-107CN | 270 Hz CW Filter | 145.00 | 124.95 | | | ■ | |
| 2972 | YF-107SN | 1800 Hz SSB Filter | 145.00 | 124.95 | | | ■ | |
| 0734 | YK-88C1 | 500 Hz CW Filter for 8.83 MHz IF | 152.00 | 129.95 | ■ | | | |
| 2877 | YK-88CN1 | 270 Hz CW Filter for 8.83 MHz IF | 152.00 | 129.95 | ■ | | | |
| 1154 | YK-88SN1 | 1.8 kHz SSB Filter for 8.83 MHz IF | 152.00 | 129.95 | ■ | | | |
| 1957 | YK-107C | 500 Hz CW Filter | 152.00 | 139.95 | | | | ■ |

[1] Not for TS-480HX [2] Two needed for TS-480HX [3] Requires MJ-88

# ALINCO

## DX-70TH



- .15-30, 50-54 Rx.
- 160-6 meters
- 100 Memories
- 100 Watts HF/6M
- IF Shift
- Dual VFO's
- Noise Blanker
- Built-In Preamp

The **Alinco DX-70TH** covers 160 to 6 meters in SSB, CW, AM and FM delivering 100/50 watts in SSB, CW and FM. The detachable control head offers remote operation. Other features include: IF shift, preamp, BFO, full QSK, dual VFOs, 100 memories, built-in CTCSS encode, attenuator and noise blanker. Supplied with EMS-42 hand mic and EBC-9 mounting bracket. Please visit our website for color photos, specifications & options.
List $1112.95 *Order #0033* **Call for price.**

### DX-70TH OPTIONS

| # | Item | Description | Price |
|---|---|---|---|
| 3403 | EDS-5 | Mic Ext. Cable 5 foot | 26.95 |
| 3499 | EDS-6 | Control Cable 15 foot | 49.95 |
| 2931 | EBC-8 | Front Remote Bracket | 14.95 |
| 2531 | EBC-9 | Extra Mobile Bracket | 24.95 |
| 3489 | EMS-14 | Desk Mic | 99.95 |

## DX-77T

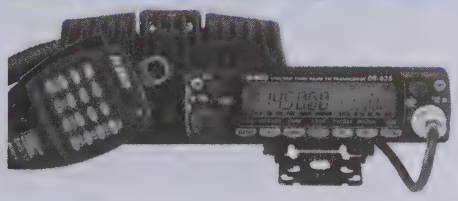
- 160-10 Meters
- 100 Hz Display
- Electronic Keyer
- CTCSS Tone Access
- 100 Memories
- Full and Semi Break-In
- 10/100W Output
- IF Shift

The **Alinco DX-77T** covers 160 to 10 meters in SSB, CW, AM, DATA and FM with 100 watts in SSB, CW and FM (40 watts AM). Other features include: IF shift, dual VFOs, 100 memories, attenuator, RIT, dial lock, CW audio filter and NB. Rear panel connectors for external amplifier, antenna, power, computer control/cloning. Size: 6.7x3.7x9 inches. Supplied with EMS-42 hand mic. Requires 12 VDC at 20 Amps.
List $1064.95 *Order #3689* **Call for price.**

### DX-77T OPTIONS

| # | Item | Description | Price |
|---|---|---|---|
| 3403 | EDS-5 | Mic Ext. Cable 5 foot | $26.95 |
| 1477 | ERW-4 | PC Interface Cable | 34.95 |
| 3489 | EMS-14 | Desk Mic | 99.95 |
| 1835 | EMS-42 | Hand Mic (as supplied) | 39.95 |
| 0932 | EDX-2 | Auto Antenna Tuner | 299.95 |

# ALINCO DR-635T



- 200 Memories
- Cross-Band Repeat
- Encode/Decode
- FM 88-108 MHz Rx.
- Remotable Head
- Optional TNC Board
- Air Band Receive
- Optional Digital Voice

The **Alinco DR-635T** transmits from 144 to 147.995 and 430 to 449.995 MHz. Receive is 108 to 173.995 and 335 to 480 MHz. Includes 200 alphanumeric memories. Power output is VHF 50/20/5W and UHF 35/20/5W. Dual band receiver with V/V, U/U, V/U and U/V capability. With EMS-57 hand mic. Order optional EDS9 *#3025* to remote the head up to 16 feet (shown above).
**DR-635T** 144 & 440 MHz. 50/35 watts
List $499.95 *Order #2635* **Please Call**

## DR-135/235 Series

- 100 Memories
- 10 Autodial Memories
- VFO Scanning
- GPS Input
- Optional TNC
- Encode/Decode
- Air Band Rx.
- DTMF Microphone

The **Alinco DR-135** series features 2 Meter 50/10/5 watt FM output with a 7 character alphanumeric display, 100 memories, aircraft (AM) plus extended receive. CTCSS encode/decode is standard. Includes EMS-56 backlit DTMF mic and DC cord. 5.6x1.7x6.1". Available with or without the optional EJ41U Packet TNC installed. Black.

**DR-135T** 144-148 MHz 50 watts
List $241.95 *Order #1980* **$169.95**

**DR-135TP** with EJ41U Packet TNC installed
List $384.95 *Order #4236* **$269.95**

**DR-235T** 220MHz 25 watts (no EJ41U)
List $349.95 *Order #4336* **$269.95**

### DR-135/235/635 OPTIONS

| # | Item | Description | Price |
|---|---|---|---|
| 3025 | EDS-9 | Head Exten. DR635 | $35.95 |
| 4411 | EJ-40 | Digital voice DR135 | 119.95 |
| 2027 | EJ-47U | Digital voice DR635 | 169.95 |
| 2014 | EJ-41U | Packet TNC DR135 | 119.95 |
| 2763 | EJ-50U | Packet TNC DR635 | 119.95 |
| 3489 | EMS-14 | Electret Desk Mic | 99.95 |
| 1354 | EMS-57 | Electret Hand Mic | 49.95 |
| 0069 | MB-130 | Extra Mobile Bracket | 17.95 |
| 1701 | PC-15B | Extra DC power cord | 9.95 |
| 4588 | SW-620 | Software CD DR135/635 | 24.95 |

# KENWOOD

## TM-G707A

From the extra-large control panel — with the welcoming glow of its amber-colored LCD — to Kenwood's new Easy Operation mode, the **TM-G707A** is extraordinarily user-friendly ... an important consideration for a mobile rig. The TM-G707A offers features such as: memory name function, S-meter squelch, time-out timer, encode/decode, dimmer, auto power-off and supplied MC-53DM backlit DTMF mic. This model had just been discontinued as we went to press.

- 180 Memories
- Memory Names
- Multi-Scan
- Priority Scan
- DTMF Hand Mic
- CTCSS Rx Display
- Auto Power Off
- Time-Out Timer
- Adv. Intercept Pt.
- PL Decode/Encode
- Dimmer
- Packet 1200/9600 Din
- Amber LCD
- Hi/Med/Lo RF Out

**Kenwood TM-G707A** 144/440 MHz 50/35W
*Order #0000* Discontinued

## TM-D700A

The advanced Kenwood **TM-D700A** dual bander allows you to harness APRS, GPS and SSTV technologies to provide world class communications. The new-generation mobile transceiver features a built-in TNC to offer a wide range of data communications options including packet operation. But above all the TM-D700A is fully equipped to make the most of APRS - Automatic Packet/Position Reporting System. [See page 63]. With backlit MC-53DM DTMF hand mic.

- 200 Memories
- Packet 1200/9600 Din
- Dual Display
- Wideband Receiver
- DTMF Hand Mic
- Auto Simplex Checker
- Auto Rep. Offset
- Digital Code Squelch
- Remote Head
- PL Decode/Encode.
- Visual Scan
- 50/10/5W Out 144
- APRS
- 35/10/5W Out 440

**Kenwood TM-D700A** 144/440 MHz 50/35W
List $662.00 *Order #4116* **Please Call**

## TM-V708A

The advanced **TM-V708A** dual bander provides world class communications. You will also enjoy wideband receive 118 MHz to 1.3 GHz (cellular blocked). The TM-V708A is similar to the TM-D700A except that it does not have APRS firmware, TNC or computer hookups. The TM-V708A comes with: MC-58DM hand mic (with Up-Down and DTMF), DC power cable, fuse, front panel mounting bracket, main unit mounting bracket, microphone hanger and Instruction Manual.

- 200 Memories
- Visual Scan
- Dual Display
- Dual Rx on same band
- DTMF Hand Mic
- Auto Simplex Checker
- Auto Rep. Offset
- DTSS Selective Call
- Guide Function
- PL Decode/Encode.
- Dimmer
- Packet 1200/9600 Din
- Reversible LCD
- Hi/Med/Lo RF Out

**Kenwood TM-V708A** 144/440 MHz 50/35W
List $486.00 *Order #3708* **Please Call**

## TM-271A

The **TM-271A** provides a big 60 watts output and is built MIL-STD 810 C/D/E/F tough. This radio has NOAA weather built in with alert tone. You get 200 memory channels (or 100 alphanumeric), CTCSS, DCS and 1750 Hz tone burst. It scans: VFO, program, memory, group, call scan, tone scan, CTCSS and DCS. It has Wide/Narrow deviation and automatic repeater offset. Meets MIL-STD 810 C/D/E/F. With illuminated DTMF mic.

- Weather Alert
- 200 Reg Memories or
- Front Speaker
- 100 Alpha Memories
- DTMF Hand Mic
- DCS Decode/Encode
- Built-in TCXO
- MIL-STD 810 C/D/E/F
- Multi-Scan
- PL Decode/Encode
- Weather
- DTMF Hand Mic

**Kenwood TM-271A** 144 MHz 60W
List $203.00 *Order #0271* **Please Call**

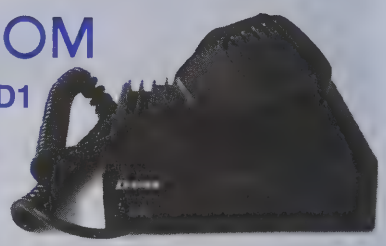
# KENWOOD Optional Accessories

| Order # | Model | Item Description | List Price | Your Price | TM-742A | TM-G707 | TM-271A | TM-D700A | TM-V708A |
|---|---|---|---|---|---|---|---|---|---|
| 2969 | DFK-3 | 9 Ft. Remote Kit (1 cable: head) | $30.00 | $27.95 | ■ | | | | |
| 3071 | DFK-4 | 13 Ft. Remote Kit (2 cbls: head/mic) | 65.00 | 59.95 | ■ | | | | |
| 3033 | DFK-7 | 22 Ft. Remote Kit (4 cbls: +audio/DC) | 99.00 | 89.95 | ■ | | | | |
| 1658 | DFK-3C | 9 Ft. Remote Kit (1 cable: head) | 49.00 | 44.95 | | ■ | | | |
| 2215 | DFK-4C | 13 Ft. Detachable Front Panel Kit | 71.00 | 62.95 | | ■ | | | |
| 2432 | DFK-7C | 23 Ft. Detachable Front Panel Kit | 112.00 | 99.95 | | ■ | | | |
| 4273 | KPS-15 | Switching Power Supply 22 Amps | 144.00 | 119.95 | ■ | ■ | ■ | ■ | ■ |
| 0214 | MB-201 | Mobile Mount | 29.00 | 24.95 | | ■ | | | |
| 2147 | MC-58DM | Lit Hand Mic With DTMF. Modular | 87.00 | 74.95 | | ■ | | ■ | ■ |
| 0368 | MC-60A | Deluxe Desk Mic. 8 Pin With Preamp[1] | 174.00 | 149.95 | ■ | | ■ | ■ | ■ |
| 1539 | MJ-88 | Modular to 8-pin Mic Plug Adapter | 35.00 | 29.95 | ■ | ■ | ■ | ■ | ■ |
| 2882 | PG-2N | DC Power Cable | 20.00 | 18.95 | ■ | ■ | ■ | ■ | ■ |
| 0303 | PG-3B | DC Line Noise Filter | 33.00 | 29.95 | ■ | ■ | ■ | ■ | ■ |
| 4134 | PG-4X | 21 Ft. Extension Cable | 76.00 | 64.95 | | | | ■ | ■ |
| 0769 | PG-5A | TNC Data Cable | 18.00 | 14.95 | | ■ | | ■ | ■ |
| 2403 | PG-5D | PC Interface Cable | 84.00 | 72.95 | | | ■ | | |
| 1349 | SP-50B | Mobile Speaker | 61.00 | 52.95 | ■ | ■ | ■ | ■ | ■ |
| 1796 | TSU-7 | Programmable CTCSS Tone Unit | 65.25 | 57.95 | ■ | | | | |
| 2957 | TSU-8 | Programmable CTCSS Tone Unit | 65.25 | 59.95 | | ■ | | | |
| 1609 | UT-50S | Module 50 MHz 50 Watts | 394.20 | 379.95 | ■ | | | | |
| 2702 | VS-3 | Voice Synthesizer | 44.00 | 36.95 | | ■ | | ■ | ■ |

[1]The MC-60A and MC-80 require the MJ-88 adapter on modular mic jack models.

# ICOM

## IC-ID1

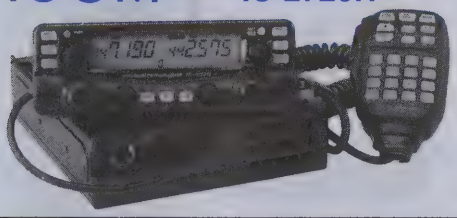


The **Icom IC-ID1** 1.2 GHz transceiver is a vital part of a D-STAR system, you won't have to wait for a new repeater to be set-up in your area. This rugged rig works with current analog 1.2GHz repeaters, plus simplex digital operation with another ID-1. Frequency range is 1240-1300 MHz, with FM and GMSK (Digital) modulation formats. The ID1 has105 alphanumeric memory channels, plus full PC control via the USB port. The ID-1 supports a 10BASE-T Ethernet cable for the 128K DATA operation! Explore the benefits of wireless high-speed integrated digital connections! Power is 1 or 10 watts. With: RC24 Remote Control head (not shown), SP-22 speaker, HM-118N Hand mic and Windows application CD.

**Icom IC-ID1** 1240 MHz 10/1 watts
List $1212.00 *Order #0337* **Please Call**

ICOM

## IC-2720H

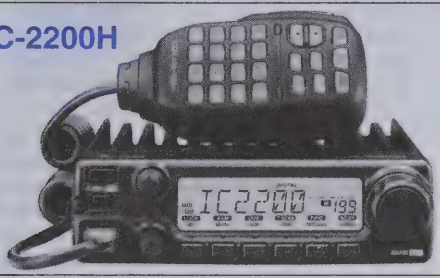


The Icom **IC-2720H** 2M/440 dual bander has separate front panel, wideband receive, CTCSS decode/encode, selectable amber/green display, PC compatibility and 212 memories. Power output is 50/15/5 watts on 2 meters and 35/15/5 watts on 440 MHz. The 2720H supports cross-band repeat and is 9600 BPS packet ready. The 2720H also includes a built-in duplexer, full function backlit remote DTMF HM-133 hand mic, MB-84 controller mounting bracket, separation cable, mounting bracket, power cable and spare fuses.

- Dual Display
- Weather Alert
- 212 Memories
- Wide Receive
- 4 RF Levels
- DTMF Mic.
- Tone Scan
- Cross-band Repeat
- V/V, U/U Receive
- 6 Scan Edge Mem
- Remotable Head
- 9600 Packet Port
- PC Programmable
- Encode/Decode

**Icom IC-2720H** 144 & 440 MHz 50/35 watts
List $480.00 *Order #0272* **Please Call**

## IC-2200H



The **IC-2200H** 2 meter FM mobile has a large 4-level backlit LCD that may be set to green or amber. The receiver covers 118-174 MHz and the transmitter delivers 65, 25, 10 or 5 watts. Improved receive IMD helps provide protection from strong signals such as pager signals. With: 207 alpha memories, 3-way priority watch and independently programmable Rx/Tx and tone squelch. The 2200H is GPS NMEA compatible. With HM133V remote mic. 5.5x1.6x5.9".

- 207Memories
- Scanning
- Call Channel
- DTMF Mic.
- Tone Scan
- Lock
- Large LCD Display
- 118-174 MHz Receive
- 65/25/10/5 W Output
- GPS NMEA compatible
- Encode/Decode
- Amber or Green LCD

**Icom IC-2200H** 144-148 MHz 65 watts
List $216.00 *Order #0102* **Please Call**

## IC-208H

The **IC-208H** 2M/440 dual bander features: detachable control panel, wideband receive, CTCSS decode/encode, PC compatibility and 500 alpha memory channels. Output is 55/15/5 watts on 2 meters and 50/15/5 watts on 440 MHz. The 208H also includes a built-in duplexer, packet port, OPC-600/R separation cable, HM-133 remote hand mic, mobile mounting bracket and spare fuses. Requires 13.8 VDC at 12 amps.

- Encode/Decode
- 9600 Ready
- 500 Memories
- Duplexer
- Weather Alert
- DTMF Mems
- FM Narrow Capable
- Three Output Levels
- Detachable Head
- RF Attenuator
- 1750 Hz Tone Burst
- Full Function Mic

**Icom IC-208H** 144 & 440 MHz 55/50 watts
List $396.00 *Order #0208* **Please Call**

## IC-V8000

The Icom **IC-V8000** delivers a big 75 watts of output and has *Weather Alert* and *Weather Channel Scan* features. 207 alphanumeric memories are supported. The supplied HM-133V remote control mic controls most everything in the palm of your hand. ICOM's exclusive Hot Keys let you program the features that you use the most. The bigger backlit keys allow you to operate in low light conditions.

- 207 Memories
- Scanning
- Call Channel
- DTMF Rem.Mic.
- DTMF Encode
- Diecast Chassis
- Large LCD Display
- Attenuator
- 75 Watt Output
- Remote Control Mic
- PL Encode/Decode
- Weather Alert

**Icom IC-V8000** 144-148 MHz 75 watts
List $240.00 *Order #4080* **Please Call**

## ID-800H

- Encode/Decode
- 9600 Ready
- 500 Memories
- Duplexer
- Weather Alert
- DTMF Mems
- FM Narrow Capable
- Three Output Levels
- Detachable Head
- RF Attenuator
- 1750 Hz Tone Burst
- Full Function Mic

Enter the world of Digital Radio with the **Icom ID-800H** 2M/440 dual bander. It features D-STAR Digital Voice Capability and supports 20 character short text messaging with on screen display. You get: detachable control panel, wideband receive, three power settings, built-in CTCSS decode/encode, PC compatibility and 500 alpha memory channels. Power output is 55/15/5 watts on 2 meters and 50/15/5 watts on 440 MHz. The ID-800 includes a built-in duplexer, OPC-600/R separation cable, and HM-133 remote hand mic.
**Icom ID-800H** 144 & 440 MHz 55/50 watts
List $748.00 *Order #1800* **Please Call**

## Optional Accessories

| Order # | Model | Item Description | List Price | Your Price | 910H | 2720H | 208H | ID-1 | V8000 | 2200H | ID-800 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0274 | CS208 | Win cloning software CD | $35.00 | $26.95 | | | ■ | | | | |
| 3677 | CSD800 | Win cloning software CD | 45.00 | 35.95 | | | | | | | ■ |
| 3191 | CSV8000 | Win cloning software CD | 35.00 | 25.95 | | | | | ■ | | |
| 3067 | CS2200H | Win cloning software CD | 80.00 | 59.95 | | | | | | ■ | |
| 4545 | CS2720H | Win cloning software CD | 35.00 | 27.95 | | ■ | | | | | |
| 2145 | MB-17A | One-touch mobile bracket | 49.00 | 39.95 | | ■ | | ■ | | | ■ |
| 1705 | MB-58 | Mount for remote head | 39.00 | 29.95 | | ■ | ■ | | | | |
| 2340 | MB-65 | Mount for MB-84/58 | 35.00 | 27.95 | | ■ | ■ | | | | |
| 3479 | MB-85 | Mounts head on radio | 25.00 | 21.95 | | ■ | | | | | |
| 0382 | OPC-346 | DC Cord 9 Ft. | 28.00 | 21.95 | | ■ | | ■ | ■ | | |
| 3236 | OPC-347 | DC Cord 23 Ft. | 46.00 | 34.95 | | ■ | ■ | ■ | ■ | ■ | ■ |
| 0223 | OPC-440 | Mic Ext. Cable 16 Ft. | 85.00 | 64.95 | | ■ | ■ | ■ | ■ | ■ | ■ |
| 2447 | OPC-441 | Speaker Ext. Cable 16 Ft. | 33.00 | 24.95 | | ■ | ■ | | ■ | ■ | ■ |
| 1180 | OPC-478 | RS232 to radio cable | 45.00 | 34.95 | | ■ | ■ | | ■ | ■ | ■ |
| 0961 | OPC-478U | USB to radio cable | 60.00 | 44.95 | | ■ | ■ | | ■ | ■ | ■ |
| 1120 | OPC-589 | Mic Ext. Cable 16 Ft. | 35.00 | 25.95 | | ■ | ■ | | ■ | ■ | |
| 4586 | OPC-600R | Front panel cable 11 Ft. | 54.00 | 39.95 | | | ■ | | | | ■ |
| 4587 | OPC-601R | Front panel cable 23 Ft. | 60.00 | 52.95 | | | ■ | | | | ■ |
| 4485 | OPC-1156 | Front panel cable 11 Ft. | 26.00 | 21.95 | | ■ | | | | | |
| 1866 | SP-10 | Mobile Speaker | 69.00 | 54.95 | | ■ | ■ | ■ | ■ | ■ | ■ |
| 3437 | UT-102 | Voice Synthesizer | 74.00 | 59.95 | ■ | | | | | | |
| 3097 | UT-106 | DSP Module | 166.00 | 139.95 | ■ | | | | | | |
| 4367 | UT-108 | DTMF Decode Unit | 35.00 | 26.95 | | | | | ■ | ■ | |
| 3504 | UT-118 | Digital voice/data Unit | 248.00 | 189.95 | | | | | | ■ | |
| 2955 | UX-910 | 1.2 GHz Module | 748.75 | 539.95 | ■ | | | | | | |

# YAESU

## FT-8900R

- 800 Memories
- Six Scan Modes
- ARTS™
- V+U/V+V/U+U
- Cross-Band Repeat
- Backlit DTMF Mic.
- CTCSS Encode/Decode
- Packet Ready

The **Yaesu FT-8900R** quad bander gives you incredible power and flexibility on the road. Operate 10 meters, 6 meters, 2 meters and 70cm. High power output is featured with 50 watts on 10, 6 and 2 meters and 35 watts on 430 MHz. It is like having two radios in one with dedicated Volume and Squelch controls on each side. Include: cross-band repeat, duplexer and CTCSS/DCS Encode/Decode. WIRES™ compatible. MH-48A6J mic.

**Yaesu FT-8900R** 10M/6M/2M/440 50/50/50/35W
List $573.91 *Order #0890* **Please Call**

## FT-2800M

- 200 Memories
- ARTS™
- Packet Ready
- DTMF Memories
- CTCSS Encode
- CTCSS Decode
- 65 Watts Output
- Weather Alert

The **Yaesu FT-2800M** makes high power operation affordable. CTCSS encode/decode built-in. Receive coverage is 134-174 MHz. Direct keypad entry is available via the supplied MH-48A6J backlit DTMF remote mic with four programmable keys. Other included items include: MMB-83 mobile mounting bracket, DC power cord with fuse, spare 15A fuse and base station feet. The fanless FT-2800M is built MIL-STD 810 tough.

**Yaesu FT-2800M** 144-148 MHz 65 watts
List $215.05 *Order #2800* **Please Call**

## FT-7800R

- 1055 Memories
- ARTS™
- Packet Ready
- DTMF Memories
- PL Encode/Decode
- DCS Encode/Decode
- Backlit DTMF Mic
- Five Hyper Memories

The **Yaesu FT-7800R** provides 50 watts on 2 meters and 40 watts on 430 MHz. The well designed front panel provides simple, safe operation. Features include: over 1000 memories, Packet 1200/9600 jack, extended receive 108 to 520 and 700-990 MHz (less cellular). It is WIRES and ARTS™ compatible. The FT-7800R comes with a MMB-36 mobile mounting bracket, DC cord and MH-48A6J Up-Down, illuminated DTMF mic.

**Yaesu FT-7800M** 144 & 440 MHz. 50/40 watts
List $337.98 *Order #3780* **Please Call**

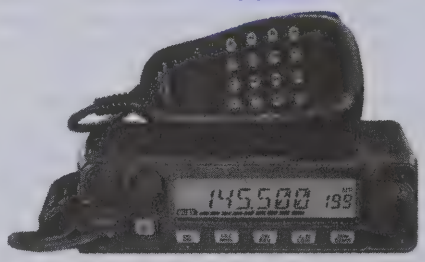
## FT-8800R

- 1000 Memories
- Six Scan Modes
- Dual LCD
- V+U/V+V/U+U
- Cross-Band Repeat
- Backlit DTMF Mic.
- CTCSS Encode/Decode
- Packet Ready

The **Yaesu FT-8800R** operates on 2 meters and 430 MHz with 50 watts on 2 m and 35 watts on 430 MHz. You get dedicated Volume and Squelch controls on each side. Built in features include: duplexer and CTCSS/DCS Encode/Decode, over 1000 memories, WIRES/ARTS™ compatible. Comes with a mounting bracket, DC cord and MH-48A6J Up-Down, illuminated DTMF microphone.

**Yaesu FT-8800R** 2M/440 50/35W
List $514.70 *Order #0080* **Please Call**

## FT-1802M



- 221 Memories
- Wires™
- NOAA Weather
- DTMF Memories
- CTCSS Encode
- CTCSS Decode
- 50 Watts Output
- Weather Alert

The **Yaesu FT-1802M** makes high power operation affordable. CTCSS encode/decode built-in. Receive coverage is 136-174 MHz. Direct keypad entry is available via the supplied MH-48A6J backlit DTMF remote mic with four programmable keys. Other included items include: MMB-36 mobile mounting bracket and DC power cord. The fanless FT-1802M has illuminated buttons and has one-touch WIRES-II™ VoIP linking.

**Yaesu FT-1802M** 144-148 MHz 50watts
List $193.55 *Order #1802* **Please Call**

## HRI-100

The **Yaesu HRI-100** Internet Linking System uses the WIRES™ - Wide-Coverage Internet Repeater Enhancement System. WIRES™-II is a technique of using Internet Voice Networking technology to link two repeaters or home stations, across a county or across a continent, thus allowing users with a hand-held or mobile transceiver to communicate over long distances. Nonproprietary DTMF signalling is used to establish the Internet link. The HRI-100 Interface, which is the electronic part of a WIRES™ node, connects to a personal computer (using Windows® 98SE or later OS), and that computer may connect either to a high-speed (DSL/ISDN/T1, etc.) or a 56 kbpd dial-up Internet connection. The HRI-100 comes with AP01 Software CD, data and audio cables (requires 12 VDC @1Amp). The Plug-and-play interconnections to FT7800/8800/8900, and other select Yaesu models, allows a WIRES™ node to be quickly created.

List $179.00 *Order #1335* **$149.95**

# YAESU

## OPTIONS

| Order # | Model | Item Description | List Price | Your Price | FT-1802 | FT-2800 | FT-7800 | FT-8800 | FT-8900 |
|---|---|---|---|---|---|---|---|---|---|
| 3519 | ADMS2H | Programming CD & PC cable | $48.78 | $37.95 | | | | | ■ |
| 2095 | ADMS2I | Programming CD & PC cable | 48.77 | 37.95 | | | | ■ | |
| 3704 | ADMS2K | Programming CD & PC cable | 48.77 | 37.95 | | | ■ | | |
| 0379 | CT-39 | Packet Cable | 11.55 | 8.95 | | | ■ | ■ | ■ |
| 3631 | FP-1023 | Switching Power Supply 23 Amp | 216.88 | 169.95 | ■ | ■ | ■ | ■ | ■ |
| 1335 | HRI-100 | WIRES™ II Internet PC Interface | 179.00 | 149.95 | | | ■ | ■ | ■ |
| 3098 | MLS-100 | Mobile Speaker | 62.00 | 45.95 | ■ | ■ | ■ | ■ | ■ |
| 0201 | MEK-2 | Mic adapter (to use 8 pin) | 53.90 | 39.95 | | | ■ | ■ | ■ |
| 0551 | MMB-62 | Front panel remote kit | 50.05 | 39.95 | | | | ■ | ■ |
| 1650 | YSK-7800 | Separation Kit (19.7 feet) | 69.30 | 54.95 | | | ■ | | |
| 2161 | YSK-8900 | Separation Kit (19.7 feet) | 69.00 | 54.95 | | | | ■ | ■ |

## YAESU ARTS™

Yaesu's exclusive ARTS™ feature can be critically important in search-and-rescue applications. ARTS provides a "handshake" with other ARTS equipped transceivers, and the display indicates if an *Out of Range* condition exists. The base station (typically a mobile like the FT-8900R) can then alert the field unit to move to a better location. A six character CW ID memory also is provided for Morse code identification of your station every ten minutes during ARTS operation.

# KENWOOD

## TH-F6A

- LCD Dot Matrix Display
- 435 Memories (3 Call)
- Alphanumeric Memory
- Encode/Decode
- Wideband Receive
- CW/SSB Rx on HF
- Double Band Scan
- Dual Freq. Receive

The **Kenwood TH-F6A** transmits in the 144, 200 and 440 MHz amateur bands and has dual channel receive capability. Enjoy 5 watts out with the supplied 7.4 volt 1550 mAh lithium-ion battery (or external 13.8 VDC power). A low power setting of 0.5 watts and an extra low power output of 0.05 watts is featured. The controls are easy to use and the LCD informs you of the exact status of the radio. This radio offers sophisticated wideband communications reception. The special "B" band has reception from 100 kHz in to 1300 MHz (less restricted freqs) in FM/AM/CW/SSB. Built to MIL-STD-810 C/D/E standards. 2.3x3.5x1.3 inches 9 oz (58x87x30 mm 250 g). This HT includes the PB-42L Lithium Ion battery, 120 VAC adapter, belt clip and single high-performance SMA antenna.
List $404.00 *Order #0066* **Please Call**

## TH-D7AG

- LCD Dot Matrix Display
- 200 Memories
- Alphanumeric Memory
- APRS
- Built-in TNC
- Auto Dial
- Versatile Messaging
- Dual Freq. Receive

**Kenwood's TH-D7AG** Data Communicator has a built-in 1200/9600 TNC and provides APRS-Automatic Packet/Position Reporting System. APRS lets you transmit your coordinates to a friend who can then pinpoint your position using a map on a computer. You can input your lat./long. manually or connect a NMEA-0183 compatible GPS (not supplied) for automatic operation (Tx interval .5, 1, 2, 3, 5, 10, 20 or 30 mins). Other features include: CTCSS, 200 8-character memories, 10 DTMF memories, dual receive on the same band V+V (VHF only) and backlit keys. RF output is 2.5/2W with the supplied PB-38 battery, 5/5W with the optional PB-39 battery or 6/5.5W from 13.8 VDC. Comes with: PB-38 battery, BC-17 wall charger, belt clip, wrist strap and flexible SMA antenna.
List $439.00 *Order #4211* **Please Call**

## TH-K2AT

- Auto Repeater Offset
- Built-in CTCSS/DCS
- Weather Alert
- Multi Scanning Modes
- Backlit Keypad
- 100 Memories
- Battery Saver Circuit
- 5/1.5/.5 Watts Out

The **Kenwood TH-K2AT** is a rugged 5 watt, 2 meter HT with straightforward operation. It has a large backlit LCD,backlit keys and Weather Alert You get 100 regular or 50 alpha memories. Enjoy simple repeater operation with auto repeater offset and automatic simplex checker. Scan types include: CTCSS, DCS and 1750 Hz tone burst. Other features include: Auto power off, time out timer, memory channel transfer, wide/narrow deviation and 13.8 VDC input jack. Three output levels (5/1.5/.5 W) for extended battery life. MIL-STD-810 C/D/E/F. With the BC21 wall charger, PB43N NiMH battery, belt clip, SMA flexible antenna and wrist strap. English/Spanish manuals.
List $162.00 *Order #2222* **Please Call**

The **TH-K2AT K2** version is the same, but with the BT-14 battery case *in place of* the PB-43N NiMH battery pack and BC-21 charger.
List $135.00 *Order #3496* **Please Call**

# KENWOOD

## Optional Accessories

| # | Model | Item Description | List Price | Your Price | TH-F6A | TH-G71A | TH-K2AT | TH-D7AG |
|---|---|---|---|---|---|---|---|---|
| 3700 | BC-19 | Rapid Charger For PB-38/39 | $70.00 | $59.95 | | ■ | | ■ |
| 3460 | BC-21 | Wall charger for TH-K2AT K2 | 22.00 | 19.95 | | | ■ | |
| 3701 | BT-11 | Battery Case 4 x Alkaline AA Cells | 19.00 | 16.95 | | ■ | | ■ |
| 3459 | BT-14 | Battery Case 6 x Alkaline AA Cells | 22.00 | 19.95 | | | ■ | |
| 4373 | BT-13 | Battery Case 4 x Alkaline AA Cells | 28.00 | 23.95 | ■ | | | |
| 4139 | EMC-3 | Clip Microphone | 26.00 | 22.95 | ■ | ■ | ■ | ■ |
| 1061 | HMC-3 | Boom Headset with VOX/PTT | 52.00 | 45.95 | ■ | ■ | ■ | ■ |
| 4436 | KHS-21 | Headset with boom mic | 36.00 | 31.95 | ■ | | ■ | |
| 3498 | KSC-24 | Rapid Desk Charger | 51.00 | 44.95 | | | ■ | |
| 3697 | PB-39 | NiCd Battery 9 VDC 600 mAh | 62.00 | 54.95 | | ■ | | ■ |
| 4374 | PB-42L | Lion Battery 7 VDC 1550 mAh | 88.00 | 74.95 | ■ | | | |
| 3484 | PB-43N | NiMH Battery 7 VDC 1100 mAh | 49.00 | 42.95 | | | ■ | |
| 1798 | PG-2W | DC Cable | 20.00 | 17.95 | ■ | ■ | ■ | ■ |
| 1280 | PG-3J | Filtered Cigar Lighter Cord | 41.00 | 34.95 | ■ | ■ | ■ | ■ |
| 3811 | PG-4W | PC Cable & Software CD | 60.00 | 52.95 | | | | ■ |
| 3471 | PG-4Y | PC Cable [DB9] | 35.00 | 31.95 | | | ■ | |
| 3698 | SC-45 | Soft Case HT with PB-38/39 | 17.00 | 15.95 | | ■ | | |
| 3860 | SC-47B | Soft Case TH-D7AG Black | 17.00 | 15.95 | | | | ■ |
| 3861 | SC-47OR | Soft Case TH-D7AG Orange | 17.00 | 15.95 | | | | ■ |
| 4384 | SC-51 | Soft Case TH-F6A | 17.00 | 15.95 | ■ | | | |
| 3464 | SC-54 | Soft Case TH-K2AT | 17.00 | 15.95 | | | ■ | |
| 2459 | SMC-32 | Mini Speaker Microphone | 58.00 | 49.95 | ■ | ■ | ■ | ■ |
| 2737 | SMC-33 | Speaker Mic with Remote | 73.00 | 64.95 | ■ | ■ | ■ | ■ |
| 1172 | SMC-34 | Speaker Mic with Remote | 35.00 | 29.95 | ■ | ■ | ■ | ■ |
| 2796 | WR-2 | Water resistant carry bag | 33.00 | 29.95 | ■ | ■ | ■ | ■ |

## VIEW ACCESSORIES

We do not have room in our catalog to illustrate accessory items but they may be viewed on our website at:
**www.universal-radio.com**

## NEED A PRICE?

The price of amateur radio gear is constantly changing as a result of coupons and promotions. For current pricing please visit our website at: **www.universal-radio.com**
or call toll-free: **1 800 431-3939**

# AvMap G4T

The **AvMap G4T** car navigator is your smart driving assistant for your business and leisure trips throughout North America. The 2 GB Secure Digital card is preloaded with the US Tele Atlas. This provides high coverage cartography which you can view in 2D or 3D mode. A Canadian/Alaskan map on DVD is included in the box. The AvMap G4T is practical and easy to use with built-in battery, built-in GPS antenna and remote control with full alphanumeric keyboard. Consult the map safely thanks to the large, ultra bright 5 inch diagonal display. The G4T is APRS ready NMEA 0183. A Kenwood-ready cable is provided for quick and easy connection to the Kenwood TH-D7AG or TM-D700A. Easy serial interfacing to the Kenwood TM-D700A and TH-D7AG is supported with full bi-directional capabilities allowing call sign display (WPL) on the Geosat screen. A USB port is provided for software upgrades. Operates from 10-35 VDC with supplied power cord or via built-in Li-Ion rechargeable battery.
List $899.00 *Order #1414* **Please Call**

ICOM

## IC-T7H

- Band & Mem Scan
- Extended Receive
- Two RF Levels
- Auto Repeater
- DTMF Keypad
- Battery Saver
- 9 DTMF Memories
- Simple Operation
- Encode/Decode

The **Icom T7H** is a dual band HT sized and priced like a single band radio and it fits in the palm of your hand. The T7H features a streamlined function set. A separate CTCSS tone encoder and CTCSS tone encoder/decoder are standard. Full/programmable band scans and all/band select memory scans provide versatile signal searching. Other refinements include: backlit LCD, 70 memories, auto power off, auto repeater function and tone scan. Power output is 4W on 2M and 3W on 440. Receive coverage: 118-174 and 400-470 MHz. A flexible BNC antenna, belt clip, wrist strap, BP-173 battery pack and BC-110A battery charger are all included. 2.25x4.9x1.2".

List $244.00 *Order #3052* **Please Call**

## IC-V8 Sport

- Rugged Construction
- Simple Operation
- Two RF Levels
- Backlit LCD
- DTMF Keypad
- Battery Saver
- Encode/Decode
- 100 Alpha Memories
- 5 DTMF Memories

The **Icom V8-15** ***Sport*** features military grade construction, CTCSS/DTCS encode/decode with tone scan and 5.5/0.5 watts out. Enjoy 100 alphanumeric memories and 3 scan modes. Five DTMF memory channels with up to 24 DTMF codes allow remote operation. The optional DTMF decoder unit (UT-108) provides code squelch operation and pager functions. Channel selection, volume, squelch and sub audible tones can be assigned to the Up/Down switches or rotary selector at your convenience. Attractive forest green polycarbonate front panel. Includes: BP-208N alkaline AA cell holder, belt clip, and BNC flexible antenna. Rechargeable battery pack and charger are optional.

List $120.00 *Order #0089* **$99.95**

## IC-V82

- Rugged Construction
- Simple Operation
- Three RF Levels
- Backlit LCD
- DTMF Keypad
- Battery Saver
- Encode/Decode
- 200 Alpha Memories
- Optional D-STAR

The **Icom V82** provides a beefy 7 watts of output poweron 2 meters for superior transmit range. You get NOAA weather, automatic repeater function, reversible control knob and up/down buttons assignment. The optional UT-118 provides D-STAR digital voice and slow data communication

The **V82-15** ***Sport*** version includes the BP-208N alkaline AA cell holder, MB-103 belt clip and BNC flexible antenna (no charger).

List $140.00 *Order #0882* **$109.98**

The **V82-25** version includes the BP-222N battery pack, BC-146 desktop trickle charger (with AD-99N insert & BC-147A wall adapter), MB-103 belt clip and BNC flexible antenna.

List $152.00 *Order #1082* **$129.95**

Universal also stocks the **U82** series for 440 use.

The **U82-15** ***Sport*** version includes the BP-208N alkaline AA cell holder, MB-103 belt clip and BNC flexible antenna (no charger).

List $170.00 *Order #0440* **Please Call**

The **U82-25** version includes the BP-222N battery pack, BC-146 desktop trickle charger (with AD-99N insert & BC-147A wall adapter), MB-103 belt clip and BNC flexible antenna.

List $200.00 *Order #0805* **Please Call**

## IC-T90A

- Tri-Band Operation
- 500 Alpha Memories
- Extended Receive
- Auto Repeater
- 10 DTMF Memories
- Backlit LCD/Keypad
- Six Scanning Modes
- Encode / Decode
- Weather Resistant

The commercial grade **Icom T90A** transmits on 6M, 2M and 440 MHz. With receive from 495 kHz to 999.990 MHz (less cellular) you can listen to SW, AM, FM and TV broadcasts, public service, military, aircraft and more. You get both DTCS and CTCSS encode and decode. The Weather Alert Scan capability checks active weather stations for NWS alert activity even while you monitor local repeater communications. Simple, one-handed operation is the most valuable feature of the T90A. The backlit keypad allows you to enter frequency, memory number and other features. The tuning knob can be customized for either channel selection or volume control. Comes with a BP-217 Li-Ion battery, BC110A wall charger, wrist strap, MB-83 swivel belt clip and SMA flexible antenna (with 6m adapter). 2.3x3.5x1.25 inches 8.5 oz

List $324.00 *Order #0690* **Please Call**

## IC-P7A

- Two RF Levels
- Wideband Receive
- 1250 Alpha Memories
- Ergonomic Controls
- MW & SW Bands
- 1.5/1.0 Watts RF
- Multiple Scan Modes
- Encode / Decode
- Weather Channel

The compact **Icom P7A** covers 2 meters with 1.5 watts and 440 MHz with 1 watt. You get wideband receive from 495 kHz to 999.99 MHz (less cellular) in AM, FM and FM-W. Enjoy AM, FM and shortwave broadcasts. The IC-P7A has 1000 regular channels, 50 band scan edges and 200 auto memory write channels. When naming channels and banks with 6-digit letters and numbers, the P7A can display the channel and bank names. CTCSS and DTCS tones are used for opening a repeater or tone squelch operation such as tone squelch and pocket beep for quiet stand-by. The pocket beep alerts the operator with a beep sound, when the transceiver receives a preset tone. With: flexible SMA antenna, wrist strap, BP-243 Lithium Ion battery pack, BC164 rapid 3 hour battery charger and BC-145LA AC adapter.

List $296.00 *Order #1177* **$239.95**

## ICOM D-STAR™

D-STAR is an open protocol developed by the Japanese government and by the J. A. R. L. Icom is currently the only company manufacturing D-STAR-compatible radios. D-STAR radios can talk directly to each other without any intermediate equipment, or through a repeater using D-STAR voice or data transceivers.

The D-STAR system supports two types of digital data streams:

The Digital Voice (DV) stream used on 144 and 440 MHz which contains both digitized voice (3600 bps including error correction) and digital data (1200 bps). Using a DV radio is like having both a packet link and FM voice operating simultaneously.

The Digital Data (DD) stream, used only on 1.2 GHz, is entirely data with a bit rate of 128k bps. The data connection to a radio that uses DV is via an RS-232 interface or USB 1.0. An Ethernet connection is used for high-speed DD D-STAR data.

## IC-91A
## IC-91AD

- Wideband Receive
- 1304 Memories
- Ergonomic Controls
- MW & SW Bands
- NMEA 0183
- Multiple Scan Modes
- Encode/Decode
- Weather Channel

The **Icom IC-91A** transmits on 2 meters and 440 MHz with a big 5 watts on either band (or 0.5 watts on low setting). It features extended receive from 495 kHz to 999.990 MHz (less cellular) and boasts 1304 memories. The A band (top) has wide reception from 495 kHz to 999.99 MHz in FM/WFM/AM (excluding cellular). The B band (bottom) receives from 118 to 174 MHz and 350 to 470 MHz in FM/FM-N/AM/DV modes. A combination of the A band and the B and can be received simultaneously, so V/V, V/U and U/U can be utilized. Available tuning steps include: 5, 6.25, 8.33 (only in air band), 9 (only AM radio band), 10, 12.5, 15, 20, 25, 30, 50, 100, 125 and 200 kHz. The model IC-91A is analog/digital upgradable (with optional UT-121) and the IC-91AD is analog/digital ready (UT-121 already built-in). With the 91AD in DV mode, you can record 30 seconds of audio into memory (or 15 seconds into 2 memory slots, or 10 seconds into 3 memory slots). It will also play a recorded message (up to 10 seconds) in response to a call directed to the user's callsign. Audio messages can even be forwarded. With an external NMEA 0183 format GPS attached (not supplied), your own and other people's position information can be sent and received. The rugged chassis is designed for the most demanding environments with JIS-4 specification for weather resistance. With SMA antenna, BP-217 Li-Ion battery pack, MB-107 belt clip and charger. 2.4 x 4.2 x 1.5".

**IC-91A** *Order #0091* **$369.95**

The **IC-91AD** has the UT-121 D-Star unit built-in!

**IC-91AD** *Order #0092* **$524.95**

### 91A/91AD OPTIONS

| # | Item | Description | Price |
|---|---|---|---|
| *4313* | **BC-139** | Drop-In Rapid Charger | **79.95** |
| *4311* | **BP-216** | Battery Case (2xAA) | **27.95** |
| *4312* | **BP-217** | Lion 7.4V 1300 mAh | **79.95** |
| *3150* | **CP-12L** | Cigar Plug for BC-139 | **27.95** |
| *4578* | **CP-19R** | Cigar Plug HT charging | **34.95** |
| *3429* | **HM-75A** | Remote Speaker Mic | **49.95** |
| *0564* | **HM-128** | Earphone Mic | **19.95** |
| *1769* | **HM-153** | Earphone Mic | T.B.A. |
| *0893* | **HS-85** | Headset VOX/PTT | **64.95** |
| *1666* | **OPC-254L** | DC Fused Cord | **12.95** |
| *0918* | **OPC-474** | Radio-Radio Clone Cable | **16.95** |
| *3327* | **OPC-782** | Earphone Adapter Cable | **12.95** |
| *4735* | **OPC-1529** | Serial PC/GPS Cable | **19.95** |
| *4736* | **RS-91** | Windows CD and Cable | **41.95** |
| *0940* | **SP-13** | Earphone (needs OPC782) | **3.95** |
| *4740* | **UT-121** | D-Star Unit for 91A | **184.95** |

## ICOM Optional Accessories

| Order# | Model | Item Description | List Price | Your Price | IC-T2H | IC-T7H | IC-P7A | IC-T90A | IC-V8 | IC-V82 | IC-U82 | IC-W32A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *2294* | **AD-56** | Cup for BC119N-11 | 18.00 | **12.95** | | ■ | | | | | | |
| *1824* | **AD-75** | PCB for BC119N-11 | 19.00 | **16.95** | | ■ | | | | | | |
| *0052* | **BC110A** | Wall Charger [BP195/6] | 40.00 | **32.95** | ■ | ■ | | | | | | |
| *1876* | **BC119N-11** | Drop in Charger[2] | 103.00 | **79.95** | | ■ | | | | | | |
| *4313* | **BC139** | Drop in Charger | 103.00 | **79.95** | | | | ■ | | | | |
| *3788* | **BC144N-51** | Drop in Charger | 101.00 | **79.95** | | | | | ■ | | | |
| *0584* | **BP-170** | Battery Case (4xAA) | 35.00 | **24.95** | | ■ | | | | | | ■ |
| *0381* | **BP-171** | NiCd 4.8V 700 mAh | 83.00 | **59.95** | | ■ | | | | | | ■ |
| *0326* | **BP-172** | NiCd 4.8V 950 mAh | 91.00 | **64.95** | | ■ | | | | | | ■ |
| *0847* | **BP-173** | NiCd 9.6V 600 mAh | 150.00 | **104.95** | | ■ | | | | | | ■ |
| *3151* | **BP-180** | NiCd 7.2V 600 mAh | 83.00 | **57.95** | | ■ | | | | | | ■ |
| *0519* | **BP-194** | Battery Case (8xAA) | 18.00 | **16.95** | ■ | | | | | | | |
| *0556* | **BP-196** | NiCd 9.6V 1050 mAh | 40.00 | **32.95** | ■ | | | | | | | |
| *3182* | **BP-208N** | Battery Case (6xAA) | 18.00 | **16.95** | | | | | ■ | ■ | ■ | |
| *3132* | **BP-209N** | NiCd 7.2V 1100 mAh | 40.00 | **32.95** | | | | | ■ | ■ | ■ | |
| *3130* | **BP-210N** | NiMH 7.2V 1650 mAh | 50.00 | **42.95** | | | | | ■ | ■ | ■ | |
| *4311* | **BP-216** | Battery Case (2xAA) | 35.00 | **27.95** | | | | ■ | | | | |
| *4312* | **BP-217** | Lion 7.4V 1300 mAh | 99.00 | **79.95** | | | | ■ | | | | |
| *3189* | **BP-222N** | NiCd 7.2V 600 mAh | 35.00 | **26.95** | | | | | ■ | ■ | ■ | |
| *1788* | **BP-243** | Liom 3.7V 1800 mAh | 56.00 | **43.95** | | | ■ | | | | | |
| *0571* | **CP-12** | Cigar Plug Filter | 36.00 | **27.95** | | ■ | | | | | | |
| *3150* | **CP-12L** | Cigar Plug Filter | 36.00 | **27.95** | ■ | ■ | | | | | | ■ |
| *4423* | **CP-17L** | Cigar Plug for BC146 | 24.00 | **19.95** | | | | | ■ | ■ | ■ | |
| *4578* | **CP-19R** | Cigar Plug Filter | 44.00 | **34.95** | | | | ■ | | | | |
| *2744* | **CP-21LR** | Cigar Plug for BC146 | 56.00 | **43.95** | | | ■ | | | | | |
| *1685* | **CS-P7A** | Win Software CD[1] | 35.00 | **27.95** | | | ■ | | | | | |
| *4314* | **CS-T90A** | Win Software CD[1] | 35.00 | **26.95** | | | | ■ | | | | |
| *4368* | **CS-V8** | Win Software CD[1] | 35.00 | **26.95** | | | | | ■ | | | |
| *3413* | **CS-V82** | Win Software CD[1] | 40.00 | **29.95** | | | | | | ■ | ■ | |
| *1660* | **CSWHH4** | Win Software with cable | 50.00 | **36.95** | ■ | ■ | | | | | | |
| *1165* | **HM-46** | Compact Speaker Mic | 45.00 | **32.95** | ■ | ■ | | ■ | | | | ■ |
| *2078* | **HM-46L** | Compact Speaker Mic | 45.00 | **33.95** | | | | | ■ | | | |
| *0969* | **HM-54** | Compact Speaker Mic | 83.00 | **58.95** | ■ | ■ | | | ■ | | | ■ |
| *3429* | **HM-75A** | Remote Speaker Mic | 70.00 | **49.95** | ■ | ■ | | ■ | ■ | ■ | ■ | ■ |
| *0564* | **HM-128** | Earphone Mic | 25.00 | **19.95** | ■ | | ■[3] | ■ | | | | |
| *3170* | **HM-128L** | Earphone Mic | 25.00 | **19.95** | | | | | ■ | ■ | ■ | |
| *4579* | **HM-131** | Remote Speaker Mic | 38.00 | **29.95** | | | ■[3] | ■ | | | | |
| *1769* | **HM-153** | Earphone Mic | T.B.A. | **T.B.A.** | | | ■[3] | | | | | |
| *1629* | **HM-153P** | Earphone Mic | T.B.A. | **T.B.A.** | | | ■ | | | | | |
| *2884* | **HM-158L** | Remote Speaker Mic | 38.00 | **29.95** | | | | | ■ | ■ | ■ | |
| *2178* | **HS-51** | Headset with VOX/PTT | 96.00 | **67.95** | ■ | | | | ■ | | | |
| *0893* | **HS-85** | Headset with VOX/PTT | 89.00 | **64.95** | | ■ | | ■ | | ■ | ■ | ■ |
| *4450* | **HS-94** | Earpiece Headset[5] | 24.00 | **19.95** | | | | ■ | ■ | ■ | ■ | ■ |
| *4451* | **HS-95** | Neck arm Headset[5] | 190.00 | **149.95** | | | | ■ | ■ | ■ | ■ | ■ |
| *4049* | **HS-97** | Throat Mic[5] | 40.00 | **32.95** | ■ | | | | ■ | ■ | ■ | ■ |
| *1095* | **LC-137** | Carry Case [BP-173/180] | 38.00 | **26.95** | | ■ | | | | | | |
| *0221* | **LC-145** | Carry Case | 38.00 | **27.95** | ■ | | | | | | | |
| *4315* | **LC-152a** | Carry Case | 24.00 | **19.95** | | | | ■ | | | | |
| *1726* | **LC-161** | Carry Case | 36.00 | **27.95** | | | ■ | | | | | |
| *3679* | **LC-F3SWIV** | Leather case with swivel | 50.00 | **39.95** | ■ | | | | | | | |
| *4375* | **NC3FGCLIP** | Nylon case with clip | 30.00 | **23.95** | | | | | ■ | | | |
| *4580* | **MB-83** | Swivel Belt Clip | 9.00 | **8.95** | | | | ■ | | | | |
| *4481* | **MB-87** | Swivel Belt Clip | 9.00 | **8.95** | ■ | | | | ■ | | | |
| *0392* | **MB-96F** | Leather Belt Hanger | 27.00 | **19.95** | | | | | ■ | | | |
| *3216* | **MB-103** | Belt Clip (with 2 screws) | 12.00 | **9.95** | | | | | ■ | ■ | ■ | |
| *1666* | **OPC-254L** | DC Fused Cord | 14.00 | **12.95** | ■ | ■ | | | | | | ■ |
| *0918* | **OPC-474** | Radio to radio clone cable | 18.00 | **16.95** | ■ | | ■ | ■ | ■ | ■ | ■ | ■ |
| *1180* | **OPC-478** | PC to radio RS232 cable | 45.00 | **34.95** | ■ | | ■ | ■ | ■ | ■ | ■ | ■ |
| *0961* | **OPC-478U** | PC to radio USB cable | 60.00 | **44.95** | | | ■ | ■ | ■ | ■ | ■ | ■ |
| *3327* | **OPC-782** | Adapter for ear/headset | 16.00 | **12.95** | | | ■ | | | | | |
| *0940* | **SP-13** | Mono Earphone | 4.00 | **3.95** | ■ | ■ | ■[3] | ■ | ■ | ■ | ■ | ■ |
| *4367* | **UT-108** | DTMF Decoder | 35.00 | **26.95** | | | | | ■ | | | |
| *3504* | **UT-118** | Digital Voice/Text Unit | 248.00 | **189.95** | | | | | | ■ | ■ | |
| *4448* | **VS-1** | VOX/PTT Unit[4] | 42.00 | **33.95** | ■ | | | ■ | | ■ | ■ | ■ |
| *4449* | **VS-1L** | VOX/PTT Unit[4] | 42.00 | **33.95** | | | | | ■ | ■ | ■ | |

[1]Requires OPC-478 [2]Requires AD-56 & AD-75 [3]Requires OPC-782 [4]Requires HS94, 95 or 97 [5]Requires VS-1

# YAESU

## FT-60R

- 1000+ Memories
- Emergency Auto ID
- DTMF Keypad
- Alpha Display
- 5 Watts both bands
- PL Encode/Decode
- DCS Encode/Decode
- NOAA Weather Alert

The **Yaesu FT-60R** 144/440 HT has 5 watts output on both bands and features wideband receive from 108-520 and 700-999.990 MHz (less cellular). An Emergency Automatic ID system can transmit your callsign and engage the mic if you are disabled and unable to press the PTT switch. Two programmable keys are provided for your convenience. There is even a password feature to prevent unauthorized use of your radio. Radio to radio cloning is possible with the optional CT-27A cable. Other refinements include: One touch NOAA weather, nine DTMF auto dialer memories, die-cast weather resistant case, and ARTS. Includes: SMA flex antenna, FNB-83 NiMH battery, Belt Clip and NC88B wall charger. Size: 2.3x4.3x1.2 inches 13.1 oz (58x109x30mm).

List $243.73 *Order #0060* **Please Call**

## VX-2R

- 1300 Alpha Memories
- ARTS/WIRES
- Encode/Decode
- DTMF Paging
- Wideband Receive
- Dual Receive
- Backlit Keypad & LCD
- Time-Out-Timer

The **Yaesu VX-2R** is a microminiature 2 meter/440 HT with extended receive range: 500 kHz to 999 MHz (less cellular). Listen to AM, shortwave and FM bands, TV audio, aircraft and public service channels. It has a hot little receiver in it. You get: CTCSS/DCS with split tone, 1300 memories (900 regular, 11 home, and 50 pairs of band edge). The aluminum diecast chassis is very rugged. Power output with the supplied 1 amp hour Lithium Ion battery 1.5 watts VHF and 1 watt UHF. With the optional E-DC21 DC adapter output jumps to 3 watts and 2 watts! The VX-2R comes with the FNB-82LI lithium ion battery and NC-85B charger, SMA flexible antenna, belt clip, plus a wrist strap. Black.

List $235.11 *Order #0176* **Please Call**

## VX-150

- 209 Memories
- 5 Watts RF Output
- Backlit Keypad
- Alpha Display
- ANI Auto Number ID
- PL Encode/Decode
- DCS Encode/Decode
- ARTS System

From the Yaesu family of companies comes the very affordable **Vertex VX-150** 2 Meter handheld transceiver. The VX-150 features transmit from 144 to 148 MHz with up to 5 watts in three power levels. Receive is from 140 to 174 MHz. You get CTCSS and DCS encode/decode plus tone search scanning and 7 character alphanumeric displays. The keypad is backlit. The VX-150 has 209 memories and 16 keys. The robust design is manufactured to Mil-Spec 810D/E. This has proven to be a very straight-forward and rugged design. Includes the SMA flex antenna, rechargable battery pack, 120 VAC wall charger and belt clip.

List $160.59 *Order #3187* **Please Call**

## VX-7R
## VX-7RB

- 132 x 64 dot matrix LCD
- Weather Alert
- 900 Memories
- AM/FM/SW BCB
- Submersible
- CTCSS/DCS
- Wideband Receive
- Clock
- Backlit Keypad & LCD

The **Yaesu VX-7R** is a tri-band (6M, 2M & 440) HT with extensive receive coverage, and leading-edge features. This American version even transceives with 300 mW on the 220 band. Power output on 6M/2M/440 is 5/2.5/1/0.5 watts. It receives the AM & FM broadcast bands, shortwave [AM], VHF/UHF TV audio, VHF Air and public service bands. Magnesium case with rubber bumpers and gaskets sets the standard in ruggedness, versatility and water resistance. It is actually submersible (3 feet for 30 minutes). Other features: 24 hour clock, 900 memories, changeable icons, severe weather alert, and multicolor LED strobe. The VX-7R also has an Internet key to access the new WIRES™ system. The **VX-7R** has silver case.

List $465.95 *Order #0777* **Please Call**

The model **Yaesu VX-7RB** is a black version.

List $465.95 *Order #0778* **Please Call**

## VX-6R

- 6 Char. Alpha,
- 900 Memories
- EPCS
- CTCSS/DCS
- AM/FM Wideband Rx
- Weather Alert
- Backlit Keypad & LCD
- Submersible
- Auto In-Range Transp.

The **Yaesu VX-6R** is a tri-band (2M, 220 & 440 MHz) HT with extensive receive 504 kHz ~ 998.99 MHz (cellular blocked). Like the VX-7R, it is submersible (JIS7) and extremely rugged. It puts out 5 Watts on 144 and 430 and 1.5 W on 220. With 900 6-digit alpha memories. It features the new "Emergency Automatic ID" (EAI) system, Enhanced Paging and Code Squelch (EPCS), "Wake-Up" battery saver system. Other features include: black magnesium case, 24 hour clock, severe weather alert, ARTS - auto in range transponder and multicolor transmit/receive LED. The volume and squelch knobs are oversized. 2.3 x 3.5 x 1.1 inches 9.5 oz. The VX6R comes with: Antenna, FNB-80LI Lithium Ion Battery, NC-72B Battery Charger, Belt Clip and Wrist Strap.

List $315.00 *Order #0666* **Please Call**

## VX-170
## VX-177

- 1000 Memories
- 5 Watts RF Output
- Backlit Keypad
- Submersible to IPX7
- EPCS
- PL Encode/Decode
- DCS Encode/Decode
- ARTS System

The **Yaesu VX-170** is a rugged, compact, high-performance 2 meter HT with 5 watts of RF power. The 16 key keypad supports direct frequency entry and 4 column DTMF. It has Enhanced Paging and Code Squelch (EPCS) that allows you to page a particular station and only receive calls from that station. You also get one-touch access to Yaesu's WIRES-II™ VOIP Internet Linking! CTCSS and DCS encode/decode are included with split tone capability. The VX-170 is ultra rugged and submersible to IPX7 specifications (3 feet for 3 minutes). Your VX-170 comes with: FNB-83 battery, NC-88B wall charger, antenna and belt clip. Please see accessories on page 67.

**Yaesu VX-170** 144 HT 16 Key Version

List $185.00 *Order #0170* **Please Call**

The **Yaesu VX-177** has very similar features but covers the 440 MHz band instead of the 2 meter band. Receive range is 420-470 MHz. 16 key.

List $185.00 *Order #0177* **Please Call**

## YAESU Accessories

| Order # | Model | Item Description | List Price | Your Price | FT-60R | VX2R | VX5R | VX6R | VX7R | VX150 | VX170 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0439 | ADMS1G | Win Software disk & cable | $48.77 | $37.95 | | | | | ■ | | |
| 1072 | ADMS1F | Win Software disk & cable | 48.77 | 37.95 | | | | | | ■ | |
| 0630 | ADMS1H | Win Software disk & cable | 48.77 | 37.95 | | ■ | | | | | |
| 4631 | ADMS1J | Win Software disk & cable | 48.77 | 37.95 | ■ | | | | | | |
| 2050 | ADMSVX6 | Win Software disk & cable | 48.77 | 37.95 | | | | ■ | | | |
| 0941 | ADMSVX170 | Win Software disk & cable | 48.77 | 37.95 | | | | | | | ■ |
| 4555 | CD-15A | Lithium-Ion rapid charger | 39.00 | 29.95 | | | ■ | ■ | ■ | | |
| 1269 | CMP-460A | Waterproof Speaker Mic. | 69.30 | 53.95 | | | | ■ | ■ | | ■ |
| 0927 | CSC-88 | Carry Case | 15.00 | 13.95 | | | | | ■ | | |
| 1591 | CSC-90 | Carry Case | 19.00 | 16.95 | | ■ | | | | | |
| 2295 | CSC-91 | Carry Case | 15.00 | 13.95 | | | | ■ | | | |
| 0375 | CT-27A | Radio to Radio Clone cable | 14.00 | 12.95 | ■ | ■ | ■ | | | ■ | |
| 3729 | CT-44 | Two pin mic adapter | 14.12 | 11.95 | ■ | ■ | ■ | | | ■ | |
| 0951 | CT-91 | Mic adapter | 12.83 | 10.95 | | | | ■ | ■ | | ■ |
| 1693 | E-DC5B | Filtered Cigar Lighter Cord | 26.00 | 23.95 | ■ | | ■ | ■ | ■ | ■ | ■ |
| 3116 | E-DC6 | DC Cord only (plug & wire) | 8.00 | 6.95 | ■ | | | ■ | ■ | ■ | ■ |
| 1373 | E-DC21 | Filtered Cigar Lighter Cord | 42.00 | 34.95 | | ■ | | | | | |
| 3173 | FBA-23 | Cell Holder (2 x AA) | 32.00 | 27.95 | | | ■ | ■ | ■ | | |
| 4163 | FBA-25A | Cell Holder (6 x AA) | 20.00 | 16.95 | ■ | | | | | ■ | ■ |
| 4162 | FNB-64 | NiCd 7 VDC 700 mAh | 58.00 | 44.95 | | | | | | ■ | |
| 4161 | FNB-V57 | NiCd 7 VDC 1100 mAh | 74.00 | 51.95 | | | | | | ■ | |
| 0949 | FNB-80LI | Lion 7 VDC 1300 mAh | 83.00 | 64.95 | | | | ■ | ■ | | |
| 1016 | FNB-82LI | Lion 7 VDC 1300 mAh | 38.00 | 32.95 | | ■ | | | | | |
| 2667 | FNB-83 | NiMH 7 VDC 1400 mAh | 65.00 | 49.95 | ■ | | | | | | ■ |
| 2631 | MH-34B4B | Compact Speaker Mic. | 38.50 | 29.95 | ■ | | ■ | | | ■ | |
| 2388 | MH-37A4B | Earpiece/Microphone | 40.00 | 29.95 | ■ | | ■ | | | ■ | |
| 1374 | MH-57A4B | Speaker Microphone | 30.00 | 24.95 | | | | ■ | ■ | | ■ |
| 4615 | VAC370 | Desktop Quick Charger | 79.00 | 64.95 | ■ | | | | | | ■ |
| 4261 | VAC400B | Desktop Quick Charger | 76.00 | 59.95 | | | | | | ■ | |
| 0669 | SU-1 | Barometric Sensor Unit | 47.00 | 36.95 | | | ■ | ■ | ■ | | |
| 4651 | VC-24 | VOX Headset | 80.00 | 62.95 | | ■ | ■ | ■ | | ■ | ■ |
| 0443 | VC-25 | VOX Headset | 84.00 | 64.95 | ■ | ■ | ■ | | | ■ | |
| 1182 | VC-27 | Earphone Microphone | 38.50 | 28.95 | | | | ■ | ■ | | ■ |

## ALINCO

### DJ-V5TH

- Alphanumeric Display
- CTCSS Enc/Dec
- 4 Scan Modes
- 200 Memories
- Accepts 12 VDC
- Auto Dialer
- Extended Rx
- Tone Burst

The **Alinco DJ-V5TH** can fill a variety of roles and it does them all well. It is loaded with technical features, 5 watts of output power and a wide array of operator conveniences. The alphanumeric display provides easy recall of up to 6 characters. The 200 memories store band, frequency, offset, CTCSS, transmit level, tuning step, DSQ and alphanumeric channel name. You get CTCSS encode and decode plus selectable tone burst (100, 1450, 1750, 2100 Hz). Built in temperature protection automatically reduces the output power when internal temperatures are too high. A big 5 watt output is provided at 3 levels with the supplied EBP-46N battery pack. The DJ-V5TH also includes the EDC-93 charger, SMA flex antenna, wrist strap and belt clip.

List $301.95 *Order #0472* **Please Call**

## ALINCO

### DJ-196T
### DJ-296T

- LCD Display
- Mosquito Repeller
- 40 Memories
- Battery Saver
- Encode/Decode
- S Meter
- DTMF Squelch
- 9 Autodial Mems.

The simple operation combined with the most wanted features make the **Alinco DJ-196T** a favorite among hams looking for 2 meters. This HT is only 2.2 x 4.9 x 1.6". The DJ-196T features: alpha display, 5 watt output, 40 memories plus call channel, 9 autodialer memories, battery saver function, direct frequency entry, auto power off with Morse alert, a backlit keypad, monitor and low power transmit keys and time out timer. The DJ-196T has extended receive from 135 to 174 MHz. This unit comes with the EDC-93 wall charger, EBP-50N NiMH pack (9.6V 700 mAH), BNC flexible rubber duck antenna, belt clip and hand strap.

List $198.95 *Order #4238* **Please Call**

The **DJ-296T** is a 220 MHz, 4.5 watt version.

List $249.95 *Order #2296* **Please Call**

### DJ-596T

- LCD Display
- Direct Freq Input
- 100 Memories
- Battery Saver
- Encode/Decode
- S Meter
- DTMF Squelch
- 9 Autodial Mems.

The **Alinco DJ-596T** 2M meter and 440 MHz dual band transceiver is full of advanced features, yet offers simple programming and operation, powerful output and the option of adding digital voice communications. CTCSS and DCS encode and decode are standard, along with a variety of tone bursts for repeater access or selective calling. DTMF sequences can be stored in autodial memories. Convenience features include: direct frequency input, 100 alphanumeric memory channels that can each store up to 15 operating parameters. Your DJ-596T comes with: EDC-93 wall charger, EBP-50N 9.6V 700 mAH 700 mAh nickel metal-hydride (NiMH) battery, BNC flexible rubber duck antenna, belt clip and wrist strap.

List $301.95 *Order #1596* **Please Call**

### DJ-V17T

- Alphanumeric Display
- CTCSS Enc/Dec
- 4 Scan Modes
- 200 Memories
- Accepts 12 VDC
- Auto Dialer
- Extended Rx
- Tone Burst

The **Alinco DJ-V17T** 2 meter HT built to stand up to the elements!. It is ruggedly built to IPX7 standards meaning it can be submersed in 3 feet of water for up to 30 minutes. This 5 watt radio has 200 memories, and back-lit alphanumeric display and direct keypad frequency entry. The receive range is 130-173.995 MHz. Tuning steps are: 5, 10, 12.5, 15, 20, 25 and 30 kHz. A strong 500 mW audio amp provides big audio. A variety of charging adapters are available. Each DJ-V17T comes standard with: EDC-146 AC charger adapter, EBP-65 Ni-MH battery and removable EA-0141 SMA flexible antenna, belt clip and hand strap. Only 2.28 x 3.78 x 0.57 inches 3.6 oz.

List $209.00 *Order #0117* **$139.95**

✔ **Alinco accessories** are on the following page.

## DJ-C7T

- Auto Power Off
- 2.28x3.78x0.57"
- Mic/Ear Jack
- 200 Memories
- 300 mW RF Out
- Lithium Ion Battery
- CTCSS Encode
- CTCSS Decode
- Built-in Speaker

The **Alinco DJ-C7T** dual-band is ready to travel the world with CTCSS encode/decode and European tone bursts built-in! The DJ-C7T also boosts wideband receive, including VHF air, FM broadcast and VHF public service. Both standard and nonstandard repeater offsets are supported. The full featured DJ-C7T provides over 300 mW of efficient output with the supplied EBP-58 lithium battery. The power jumps to 500 mW when operating from external 6 VDC. The built-in speaker makes this little radio sound big! Includes: EDC-126 AC adapter, EBP-58N battery and removable SMA flex antenna. 2.28 x 3.78 x 0.57" 3.6 oz.
List $221.95 *Order #0107* **Please Call**

## DJ-S40T

- Time Out Timer
- 12 VDC input
- Mic/Ear Jack
- 100 Memories
- 500 mW on AAs
- 4 Tone bursts
- CTCSS Encode
- CTCSS Decode
- Built-in Speaker

The Alinco DJ-S40T 440 MHz HT has a unique case conceals the speaker behind the informative, illuminated LCD. You get 1 watt output with optional Ni-MH battery pack (0.5 watts normally). You'll be ready to travel the world with 38 CTCSS encode/decode and 4 European tone bursts, all included at no extra cost. Three different types of scanning are available. Comes with dry cell (3 x AA) case, belt clip, wrist strap and flexible SMA antenna. Only 2.2 x 4.0 x 1.2 inches inches.
List $109.50 *Order #3285* **$84.95**

## ALINCO Accessories

| Order # | Model | Item Description | List Price | Your Price | DJ-196T | DJ-596T | DJ-C7T | DJ-V5TH | DJ-S40T | DJ-S45T | DJ-S11T | DJ-V17T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1791 | EBP-45N | NiCd 6 VDC 700 mAh | 48.95 | 44.95 | | | | ■ | | | | |
| 2052 | EBP-46N | NiCd 9 VDC 700 mAh | 64.95 | 49.95 | | | | ■ | | | | |
| 0184 | EBP-48N | NiCd 9 VDC 700 mAh | 64.95 | 54.95 | ■ | | | | | | | |
| 4409 | EBP-50N | NiMH 9 VDC 700 mAh | 23.80 | 21.95 | ■ | ■ | | | | | | |
| 4410 | EBP-51N | NiMH 9 VDC 1500 mAh | 37.95 | 34.95 | ■ | ■ | | | | | | |
| 0757 | EBP-52N | NiMH 3 VDC 100 mAh | 37.95 | 34.95 | | | | | ■ | | | |
| 2979 | EBP-53N | NiMH 6 VDC 100 mAh | 45.95 | 39.95 | | | | | ■ | | | |
| 0765 | EBP-54N | NiMH 3 VDC 1500 mAh | 49.95 | 44.95 | | | | | ■ | | | |
| 2086 | EBP-58N | Lion 3 VDC 600 mAh | 37.95 | 33.95 | | | ■ | | | | | |
| 1616 | EBP-60 | Lion 3 VDC 1200 mAh | 47.99 | 36.95 | | | | | | ■ | | |
| 4710 | EBP-63N | Lion 7 VDC 1000 mAh | 51.99 | 41.95 | | | | | | | | ■ |
| 4711 | EBP-64N | Lion 7 VDC 1500 mAh | 55.99 | 44.95 | | | | | | | | ■ |
| 4712 | EBP-65N | NiMH 7 VDC 700 mAh | 37.99 | 34.95 | | | | | | | | ■ |
| 4713 | EBP-66N | NiMH 7 VDC 2000 mAh | 39.99 | 36.95 | | | | | | | | ■ |
| 3664 | EDC-36 | Mobile Charger | 24.95 | 19.95 | ■ | ■ | | ■ | | | | |
| 0708 | EDC-37 | DC Power Cable | 7.95 | 6.95 | ■ | ■ | | ■ | | | | ■ |
| 0103 | EDC-43 | Mobile DC Power Cable | 10.95 | 7.95 | ■ | ■ | | ■ | | | | ■ |
| 4043 | EDC-91 | AC NiCd Quick Charger | 60.95 | 49.95 | | | | ■ | | | | |
| 1133 | EDC-93 | AC P.S. for EDC-105 | 10.95 | 10.95 | | | | | ■ | | | |
| 4412 | EDC-97 | AC NiMH Quick Charger | 70.95 | 59.95 | ■ | ■ | | | | | | |
| 1579 | EDC-105 | Charger [needs EDC-93] | 24.95 | 21.95 | | | | | ● | | | |
| 0861 | EDC-138 | Quick charger for EBP-60 | 67.50 | 52.95 | | | | | | ■ | | |
| 4714 | EDC-143 | Charger for EBP-65/66 | 34.99 | 28.95 | | | | | | | | ■ |
| 4722 | EDC-144 | Charger for EBP-63/64/65/66 | 69.99 | 57.95 | | | | | | | | ■ |
| 4715 | EDC-146 | Charger for EBP-66/66 | 13.99 | 12.95 | | | | | | | | ■ |
| 2625 | EDH-18 | DC Cigar Plug | 32.95 | 28.95 | | | | | | | ■ | |
| 0591 | EDH-29 | Battery Case (4 x AA) | 12.95 | 11.95 | | | | ■ | | | | |
| 4212 | EDH-30 | Battery Case (4 x AA) | 15.95 | 12.95 | ■ | ■ | | | | | | |
| 1783 | EDH-31 | Battery Case (3 x AA) | 12.95 | 11.95 | | | | | ■ | | | |
| 2216 | EDH-32 | DC Cigar Plug | 19.95 | 15.95 | | | ■ | | | | | ■ |
| 4716 | EDH-34 | Battery Case (6 x AA) | 15.95 | 13.95 | | | | | | | | ■ |
| 4717 | EDS-10 | Microphone/Speaker cable | 12.95 | 10.95 | | | | | | | | ■ |
| 4718 | EDS-11 | Clone cable | 12.95 | 10.95 | | | | | | | | ■ |
| 4408 | EJ-43U | Digital Board | 113.00 | 99.95 | | ■ | | | | | | |
| 0465 | EME-12 | VOX/PTT Headset | 71.95 | 62.95 | ■ | ■ | | ■ | ■ | ■ | | ◆ |
| 2827 | EME-13 | VOX Mic & Earphone | 71.95 | 61.95 | ■ | ■ | | ■ | ■ | ■ | | ◆ |
| 2842 | EME-15 | Tie-pin VOX Mic & Earphone | 56.95 | 49.95 | ■ | ■ | | | | ■ | | ◆ |
| 0000 | EME-17 | Headphone Earphone Mic | Discontinued | | ■ | ■ | | ■ | ■ | | | |
| 4413 | EME-20 | Earphone and Tie-Clip Mic | 22.95 | 19.95 | ■ | ■ | | ■ | ■ | | | ◆ |
| 2290 | EME-24 | Earphone and Tie-Clip Mic | 39.95 | 28.95 | | | ■ | | | | | |
| 0534 | EMS-47 | Speaker Mic | 24.95 | 22.95 | ■ | ■ | | ■ | | ■ | ■ | |
| 2281 | EMS-60 | Speaker Mic | 41.95 | 34.95 | | | ■ | | | | | |
| 1477 | ERW-4 | PC Interface Cable [DB-9F] | 39.95 | 34.95 | ■ | ■ | ■ | | | ■ | | |
| 2125 | ESC-27 | Case | 16.95 | 13.95 | | | | | | | ■ | |
| 1766 | ESC-35 | Case For EBP-45/46N | 13.95 | 11.95 | | | | ■ | | | | |
| 2830 | ESC-36 | Case For EBP-48/50N | 13.95 | 11.95 | ■ | ■ | | | | | | |
| 2259 | ESC-38 | Case | 14.95 | 13.95 | | | ■ | | | | | |
| 4721 | ESC-41 | Case | 16.95 | 13.95 | | | | | | | | ■ |
| 4568 | SW-596 | Win Clone Software CD | 29.95 | 24.95 | ■ | ■ | ■ | | | | | |

● Needs EDC-93 adapter ◆ Needs EDS-10 adapter

## DJ-S11T

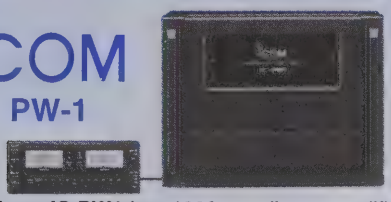
The **Alinco DJ-S11T** 2 meter HT is no bigger than a pager. It features a swing-down, self-storing antenna and 20 memories. It is easy to operate, has a backlit LCD and you can send a 1750 Hz tone burst, or any of 50 CTCSS codes for repeater operation worldwide. An alarm/alert feature is also included. It can operate from three AA cells (not supplied). Only 2-1/6 x 4 x 1-1/10 inches 6.5 oz. The DJ-S11T comes standard a wrist strap, antenna and belt clip.
List $112.95 *Order #1191* **$84.95**

## DJ-S45T

The **Alinco DJ-S45T** 440 MHz FM HT offers a full range of features plus a choice of power options. Its rugged design is resistant to rain, dirt and dust. RF output is 2 watts with external 6 VDC, 1 watt with optional EBP-60 Li-Ion battery pack, 0.5 watt when operating from two alkaline AA cells or 0.4 watt when operating from two Ni-MH AA cells (batteries are not supplied). The DJ-S45T comes with dry cell (2 x AA) case, belt clip, wrist strap and flexible SMA antenna. 2.25 x 3.86 x 1.17 inches.
List $179.00 *Order #0145* **$129.95**

ICOM

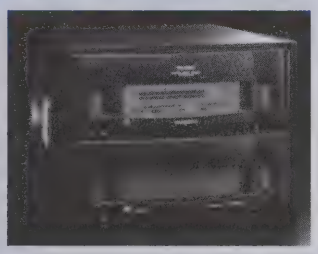
## PW-1



The Icom **IC-PW1** is a 1000 watt linear amplifier with built-in power supply. This state-of-the-art, heavy duty amp covers HF plus 6 meters. It features auto band changing, four antenna connectors and three cooling fans. The control head is removable and remoteable.
List $5930.00 *Order #2925* **Please Call**

YAESU

## VL1000



The **Yaesu VL-1000** Quadra System high performance linear amplifier coves 160 to 15 and the 6 meter amateur bands. Combined with its matching VP-1000 power supply unit, the VL-1000 is a compact desktop design utilizing rugged MRF150 MOSFETs in a four-unit, push-pull configuration to provide 1000 watts output (500 watts on 6 meters). Automatic band-switching is provided when used with many Yaesu transceivers. Shown above in optional MR-1000 mounting rack. Three year manufacturer's limited warranty!
List $4739.00 *Order #3641* **$3999.00**

**Yaesu MR-1000** mounting rack for VL1000.
List $299.00 *Order #3717* **$279.95**

AMERITRON

## AL-80B

The **AL-80B** combines a single *Eimac 3-500* power tube with a heavy-duty tank circuit for up to 70% plate efficiency. Frequency: 15, 20, 40, 80 and 160 meters. Drive power: 85 watts for full output. RF Input power: SSB-1000 watts PEP, CW-850 watts. Power requirement: 120VAC 15A, 240VAC 7.5A. Weight: 48 Lbs.
List $1399.00 *Order #0575* **$1359.95**

## AL-82

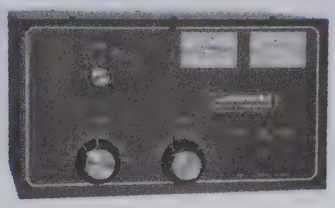
This HF linear amp from Ameritron uses a pair of *Eimac 3-500* power tubes for full legal output power. Frequency: 15, 20, 40, 80 and 160 meters. Drive Power: 100W for full output. Requires: 240 VAC 15A. Weight: 77 Lbs. (91 Lbs. ship in 3 boxes).
List $2645.00 *Order #2889* **$2499.95**

## ALS-600

This revolutionary amp is amateur radio's *only* linear amplifier that uses four rugged TMOS RF power FETs yielding unequaled no tune solid state performance. Output power is 700 watts PEP with continuous coverage from 1.5 to 22 MHz. Includes amplifier and 120/220 VAC power supply.
List $1299.00 *Order #1760* **$1199.95**

Universal will modify the Ameritron HF linear amplifiers for 10 meter operation at the time of purchase, with proof of your Amateur radio license, for $30 plus parts.

## AL-811

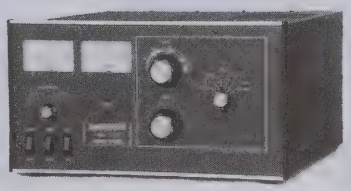


This amp uses three tough *811A* tubes to give you 600 watts of PEP output. 13.75"W x 8.65"H x 16"D. Weight: 31 Lbs. (40 Lbs. ship).
List $699.00 *Order #1883* **$669.95**

## AL-811H

Like the AL-811A, but with four fully neutralized tubes for 800 watts.
List $849.00 *Order #2902* **$829.95**

## AL-1200



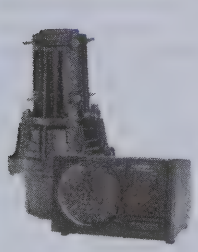
Enjoy 1500 watts in all modes on: 15, 20, 40, 80 and 160 meters. 100 watts drive for full output. Requires: 240VAC 15A. Weight: 77 Lbs. (35 kg) 88 Lbs ship in 3 boxes.
List $2695.00 *Order #1063* **$2499.95**

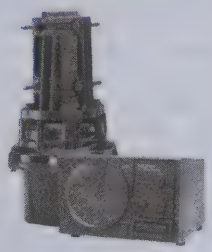
## AL-1500

The **AL-1500** uses a *3CX1500* tube to deliver 1500 watts CW with as little as 65 watts drive on 15, 20, 40, 80 and 160 meters. Requires 240VAC 15A. Weight: 77 Lbs. (88 Lbs. ship in 3 boxes).
List $3045.00 *Order #3037* **$2699.95**

YAESU

## G-800DXA G-2800SDX





Yaesu rotators are precision-designed for a wide variety of antenna installations. Smooth and quiet in operation, these rotators are housed in weatherproof, die-cast aluminum enclosures and are permanently lubricated.

**G-450A** Light Duty. Wind load: 10 sq. ft.
List $289.00 *Order #3745* **$259.95**

**G-800SA** Medium Duty. Wind load: 16 sq. ft.
List $394.00 *Order #4227* **$339.95**

**G-800DXA** Medium Duty. Wind load: 17 sq. ft.
List $492.00 *Order #4200* **$419.95**

**G-1000DXA** Heavy Duty. Wind load: 23 sq. ft.
List $593.00 *Order #4148* **$499.95**

**G-2800DXA** Extra Heavy Duty. Wind : 34 sq. ft.
List $1329.00 *Order #0266* **$1149.95**

**G-550** Elevation only
List $349.00 *Order #0113* **$319.95**

**G-5500** Azimuth-Elevation
List $719.00 *Order #0180* **$639.95**

Please see **ROTOR CABLE** on page 43.

MIRAGE

Mirage VHF/UHF amplifiers are designed for rugged reliable all-mode operation. There is a model offered for any portable or fixed station installation.

Ant connector types: B=BNC, U=UHF, N=N.

| Order # | Model | Band | In W | Out W | Mode | Pre | Ant | Required Power | List | Your Price |
|---|---|---|---|---|---|---|---|---|---|---|
| *2671* | **BD35** | 2 M/440 | 4 | 45/35 | FM | No | U | 12VDC at 7A | $169.95 | **$159.95** |
| *3469* | **B34** | 2 Meter | 2 | 35 | FM | No | U | 12VDC at 5A | 89.95 | **84.95** |
| *3468* | **B34G** | 2 Meter | 2 | 35 | MM | Yes | U | 12VDC at 5A | 109.95 | **102.95** |
| *1481* | **B310G** | 2 Meter | 8 | 100 | MM | Yes | U | 12VDC at 15A | 219.95 | **204.95** |
| *3180* | **B1018G** | 2 Meter | 10 | 160 | MM | Yes | U | 12VDC at 25A | 409.95 | **389.95** |
| *2189* | **B2518G** | 2 Meter | 25 | 160 | MM | Yes | U | 12VDC at 22A | 329.95 | **309.95** |
| *0433* | **D26N** | 70 cm | 2 | 60 | MM | No | N | 12VDC at 12A | 299.95 | **289.95** |
| *0435* | **D1010N** | 70 cm | 10 | 100 | MM | No | N | 12VDC at 20A | 419.95 | **399.95** |
| *2756* | **D3010N** | 70 cm | 30 | 100 | MM | No | N | 12VDC at 20A | 389.95 | **369.95** |

## GS-232B

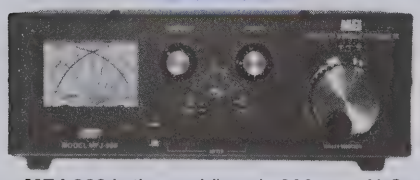
The **Yaesu GS-232B** Rotor Computer Interface provides digital control of most Yaesu antenna rotators. The 3 wire async serial line can be configured for serial data rates from 1200 to 9600 baud. The unit has a DB-9 male connector for to connection to your RS232C port. Supplied items include: Control cable for the Azimuth rotor (5 in to mini DIN), Control cable for the Az/El rotor (Dual 5 pin to DIN cable), DC power cable and hook and loop fasteners. Requires 12 VDC at 110 ma. The Yaesu C1000 cable is required for the SDX series.
List $806.67 *Order #4228* **$599.95**

## MFJ-989D

This famous 3 KW HF antenna tuner features two massive transmitting capacitors and a roller inductor with a three digit counter to let you get the SWR down to the absolute minimum. Frequency range is 1.8 to 30 MHz. The peak reading cross-needle SWR/power meter has forward power ranges of 200 and 2,000 watts. Outputs for two coax cables, one wire or balanced line and dummy load are provided. A 300 watt, 50 ohm dummy load is built-in. 10¾ x 4½ x 15". ◆

List $369.95 *Order #1332* **$339.95**

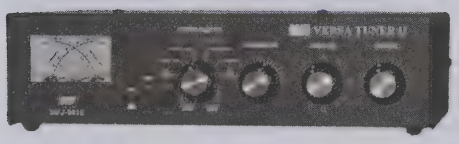
## MFJ-969



The **MFJ-969** is the world's only 300 watt AirCore roller inductor tuner covering 160 through 6 meters. You get a cross-needle SWR/wattmeter, 8 position antenna switch, built-in 50 ohm dummy load and a heavy duty 4:1 balun. 3½ x 10½ x 9½".

List $199.95 *Order #3538* **$179.95**

## MFJ-941E



This 300 watt PEP antenna tuner covers from 1.8 to 30 MHz, outputs for two coaxial cables and one random wire or balanced line. The SWR/power meter reads forward and reflected power in 30 & 300 watt ranges. 11 x 3 x 7 inches. ◆

List $129.95 *Order #1130* **$114.95**

## MFJ-949E

MFJ's deluxe 300 watt Versa Tuner II gives you full coverage from 1.8 to 30 MHz, a peak and average reading cross-needle SWR/power meter and a built-in 300 watt dummy load. Outputs are provided for two coaxial cables and one random wire or balanced line. 10 x 3 x 7" (254x76x178mm).

List $169.95 *Order #1146* **$149.95**

## MFJ-948

Similar to the MFJ-949E without the dummy load.◆

List $139.95 *Order #0648* **$124.95**

## MFJ-986

This new and innovative Differential-T 3 KW roller inductor tuner from MFJ covers 1.8 to 30 MHz continuously. The lighted cross-needle meter not only shows you both forward and reflected power at a glance, but also has a peak reading function. Outputs are provided for two coaxial cables, one balanced line and a dummy load. ◆

List $339.95 *Order #0706* **$309.95**

## MFJ-962D

The **MFJ-962D** 1.5 KW Versa Tuner III features two continuously variable capacitors to minimize your SWR. The peak and average reading cross-needle SWR/power meter makes tuning a snap. Outputs for two coax cables, one random wire and one balanced line. 10¾" x 4½" x 15". ◆

List $279.95 *Order #1330* **$249.95**

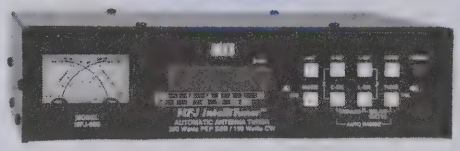
**NOTE**: MFJ tuners marked with a ◆ feature illuminated meters. For these meters to light you must provide 12VDC or the correct MFJ power supply.

## MFJ-922

The **MFJ-922** VHF/UHF dual band antenna tuner and SWR/power meter is designed for 136-175 MHz and 420-460 MHz. It can handle up to 60 or 150 watts in two ranges. The meter can read SWR or power. Input and output is SO-239. Tuning is achieved by the setting of slugs for each of the two bands. A setting screwdriver is included. 4 x 2.5 x 1.25 inches.

List $89.95 *Order #3198* **$84.95**

## MFJ-993B

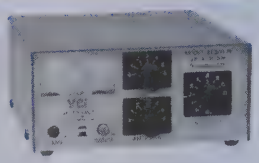


The **MFJ-993B** IntelliTuner™ lets you tune any antenna automatically balanced or unbalanced - ultra fast. It is complete with SWR/watt-meter, antenna switch for two antennas and 4:1 current balun for balanced lines. You get a highly efficient L-network, wide 6-1600 ohm matching at full 300 Watts SSB/150 Watts CW, 1.8-30 MHz coverage, cross-needle and digital meters, aural SWR meter, backlit LCD display, remote control port, radio interface, heavy-duty 16 amp/1000 volt relays and more. Requires 12-15 VDC at 1 amp (or optional MFJ-1316 *#1469* $21.95). Only 10 x 2¾ x 9".

List $259.95 *Order #1846* **$239.95**

VCi VECTRONICS

## VC300M



The **VC300M** tuner is compact, lightweight, easy to operate and perfect for mobile operation. Features a dual movement, backlit meter for viewing power and SWR at the same time. Covers 1.8-30 MHz and is rated at 300 watts maximum power.

List $119.95 *Order #3383* **$109.95**

## VC300D

The **VC300D** is Vectronics' top-of-the line antenna tuner lets you read peak output power via the digital bargraph display. 1.8-30 MHz, 300 watts max.

List $209.95 *Order #3384* **$189.95**

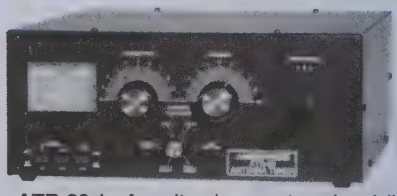
## VC300 DLP

The **VC300DLP** tuner has a built-in dummy load, a peak or average reading meter and is easy to operate. Operating range is 1.8-30 MHz with max. power at 300 watts continuous. 10.2 x 9.4 x 3.5"

List $169.95 *Order #3398* **$149.95**

AMERITRON

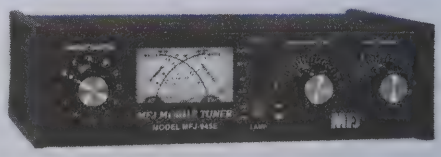
## ATR-30



The **ATR-30** is Ameritron's own true legal limit antenna tuner allowing operation at sustained true RF output levels of over 1500 Watts continuous carrier into most load impedances. It also handles 3000 watts continuous SSB, CW duty even on 160 meters where most other antenna tuners fail.

List $599.95 *Order #4007* **$569.95**

## MFJ-945E

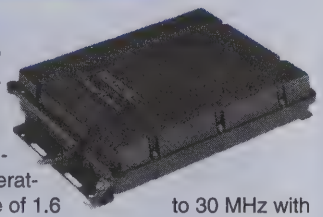


The compact **MFJ-945E** 300 watt tuner with illuminated cross-needle display, is ideal for mobile operation. The convenient placement of controls makes tuning fast and easy while driving. The SWR/power meter reads in 30 and 300 watt scales. 1.8-60 MHz. 8 x 2 x 6".◆

List $119.95 *Order #1541* **$104.95**

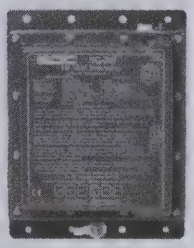
SGC

## SG-230



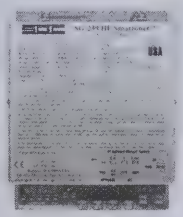
The **SG-230** Smartuner™ is a microprocessor controlled automatic antenna tuner operating in the range of 1.6 to 30 MHz with 3 to 150 watts of input power. It has a 500 address nonvolatile memory and tunes antennas from 8 to 80 feet. Weatherproof case. 12 x 16 x 3 inches.
**SG-230** *Order #2834* **$499.95**

## SG-237



The **SG-237** coupler handles up to 100 watts in the range of 1.8 to 60 MHz. Minimum antenna length of 9 feet is required for 3.5 to 60 MHz and 23 feet for 1.8 to 60 MHz. Power input is 3 to 100 watts. 6 x 7 x 1.5" Requires 13.8 VDC at 300 ma.
**SG-237** *Order #1238* **$359.95**

## SG-239



The **SG-239** fits the coupler requirement of the many low cost HF transceivers such as: Scout, FT-817, TS-50, IC-706 and K2. The unit will work with silent receiver tuning 1.8-30 MHz, with 1.5 to 200 watts. It has 170 memories, with fast, accurate tuning via independent sensors, including VSWR, phase, magnitude, low impedance, and forward sensing. Requires 13.8 VDC at 230 ma. 6 x 1.85 x 7.5".
**SG-239** *Order #1401* **$179.95**

## AT200 PC

The **LDG AT-200 PC** is an automatic antenna tuner *specifically* engineered for USB computer control. It is designed to operate from 1.8 to 54 MHz with up to 250 watts of power. It's features include: tune without transmitting, automatic frequency tracking, USB or serial connection, flash upgradeable firmware. Includes 10 foot USB cable and software.
List $259.95 *Order #0323* **$249.95**

## Z-11Pro

The **LDG Z-11Pro** is everything you always wanted in a small, portable tuner designed from the ground up for battery operation. Only 5" x 7.7" x 1.5", and weighing only 1.5 pounds, it handles 0.1 to 125 watts, making it ideal for both QRP and standard 100 watt transceivers from 160 - 6 meters. Requires 7 to 16 volts DC at 300 mA Max. 25 uA standby or 8 x AA or AAA cells (not supplied).
List $179.00 *Order #2159* **$169.95**

# Miracle Antenna

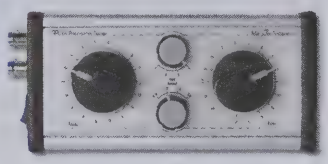
## DUCKER PL

The **Miracle Ducker** is a portable QRP antenna tuner that will take rubber ducks, random wires, coax ... almost anything! Like the original Miracle Whip, this device is designed for QRP (maximum of 25 watts SSB or 10 watts CW). As you would guess, the Ducker is a perfect marriage with the Yaesu FT-817. Input is BNC female. Output is PL-259 for direct connection to your radio. It tunes random wires, balanced lines and coax over a wide frequency range. Utilizes a genuine C-VAT transformer. Three year limited manufacturer's warranty. Manufactured and warranted by Miracle Antenna of Canada.
*Order #2799* **$129.95**

## DUCKER IL

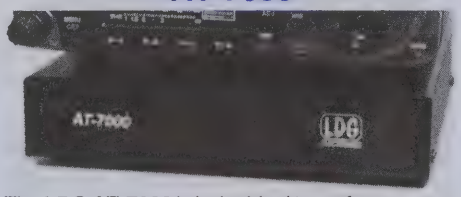
The **Miracle Ducker IL** is an InLine QRP and wideband receive antenna tuner that attaches directly to the BNC on your radio! It significantly improves the HF performance of portable wideband receivers and even regular "scanners". It can also be used transceive on newer amateur HTs (with HF rx) to improve shortwave reception. Like the original Miracle Whip, this device can also be used for QRP (to 25W SSB or 10W CW). I/O is BNC.
*Order #3506* **$128.95**

## Q-PAK



The **Miracle QPak** is an amazing HF QRP antenna tuner with ground breaking efficiency, quality and performance. It covers 80 through 6 meters up to 20 watts. BNC input and output. It is all housed in a rugged aluminum extruded case that is less than one inch thick! Made in Canada.
*Order #0687* **$189.95**

## AT-7000



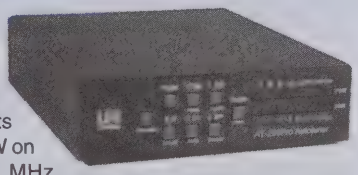
The **LDG AT-7000** is is the ideal tuner for your new IC-7000. First, it matches up to 10:1 SWR (3:1 on 6 meters) and it has 2,000 memories. The AT-7000 is only 6.5 x 6.5 x 1.25 inches and gets its DC power directly from the radio. SO-239 input and output. The AT-7000 works with any Icom radio that supports AH-3/4 Icom antennas such as IC-7000/706MkIIG/703+/718/746/756ProIII. Includes a 14 inch radio cable and 14 inch coax jumper.
List $169.00 *Order #1046* **$164.95**

LDG ELECTRONICS

## AT-100 Pro

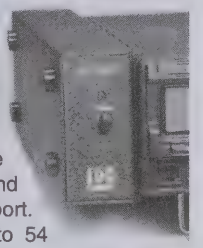
The **LDG AT-100 Pro** desktop tuner covers all frequencies from 1.8 to 54 MHz handling 1 to 125 watts. It features over 2,000 memories for each antenna. The easy-to-read LED bargraphs show power and SWR, and a Function key on the front panel allows you to access mode and status data.
List $219.00 *Order #2077* **$209.95**

## AT-200 Pro



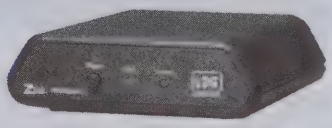
The **LDG AT-200 Pro** will handle up to 200 watts SSB or CW on 1.8 – 30 MHz, and 100 watts on 54 MHz. It will match virtually any kind of coax-fed antenna. Use the AT-200 with longwires, random wires and antennas fed with ladder line with the optional RBA-1 balun. It will typically match a 10:1 SWR down to 1.5:1 in just a few seconds. The AT-200 has 16,000 memories, automatically storing tuning data for frequencies and bands as you use them. The rear panel has two input SO239s and one output SO239. Optional interface cables for Icom, Kenwood and Yaesu. Requires 11-16 VDC at 750 ma.
List $249.00 *Order #2727* **$234.95**

## AT-897



The **LDG AT-897** is an autotuner for use with the FT-897 and mounts on the side of your rig. The AT-897 takes power directly from the CAT port of the FT-897 and provides a second CAT port. Continuous coverage 1.8 to 54 MHz is provided with an HF power rating of .01 to 100 Watts. Antenna impedance is 6 to 800 Ohms. Tuning time is 1 to 7 seconds.
List $199.00 *Order #0218* **$189.95**

## Z-100



The **LDG Z100** will tune HF with 0.1 to 125 watts (50 watts on 6 m), making it an excellent choice for almost any radio. It features 200 fast memories to decrease tuning time up to 95%! Requires 9-16 VDC at 300 ma.
List $149.00 *Order #2088* **$139.95**

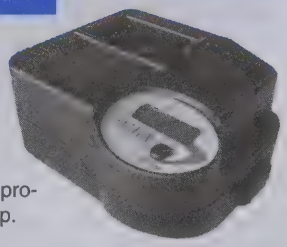
LDG ELECTRONICS

## RBA

The **LDG RBA** baluns operates from 1.8 to 30 MHz, up to 200 watts.
**RBA-4:1** *Order #2286* **$28.95**
**RBA-1:1** *Order #2046* **$28.95**

MAHA

## MH-C888



The **Maha MH-C888** Universal Charger Conditioner will charge most battery packs with the appropriate optional cup.

List $59.95 *Order #3982* **$52.95**

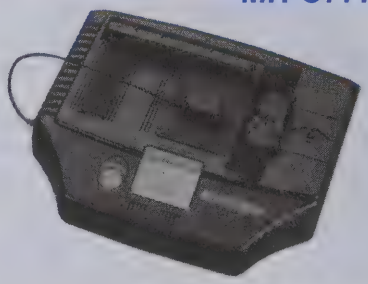
**MHS-C801 Cup**
For: ICOM 2SAT/W32 Kenwood TH22/42/77AT/79, Yaesu FT10/40/50R
*Order #3983* **$6.95**

**MHS-C802 Cup** For: ICOM 02AT/2AT/H6, Ken. TH24/48/78, Yaesu FT-23R/470/530
*Order #3984* **$6.95**

**MHS-C803 Cup** For: Kenwood TH-G71A/D7
*Order #3985* **$6.95**

**MHS-C804 Cup** For: ICOM T8A/T81
*Order #3986* **$6.95**

## MH-C777+II



The **Maha MH-C777+II** Universal Charger Analyzer will analyze, charge and condition nearly any Lithium Ion, NiMH, and NiCad battery pack for your ham radio, cell phone or cam corder. The floating contact pin system enables you to move the charging contacts from left to right and from top to bottom to charge almost any shape of battery packs. The display shows digital voltage, time and capacity during both charge and discharge. It supports 1.2 to 14.4 volts (1 to 12 cells) for NiMH and NiCd or 3.6 to 14.4 volts for Lithium Ion. Includes AC adapter and a car kit.
List $89.95 *Order #1392* **$69.95**

## MH-C808M

The **Maha MH-C808M** Charger can charge up to 8 cells and works with AAA, AA, C or D cells. Charge AA, AAA, C and Ds all at once. It's like having eight chargers! The MH-C808M provides user with the option to choose between a soft charge and a fast charge mode. The Soft mode delivers the highest battery life and allows 100% compatibility with older, lower capacity batteries. The unit includes a heavy duty switching AC power supply. This charger has a very neat backlit LCD display that displays the charging status for each battery independently.
List $139.95 *Order #4724* **$109.95**

## MH-C401FS4AA25

The **Maha MH-C401FS4AA25** lets you recharge 4 AA or AAA NiMH/NiCD batteries accurately and coolly. Comes with four AA 2500mAh NiMH cells.
List $49.95 *Order #0948* **$44.95**

MFJ

## MFJ-1116

Organize your 12 VDC power leads (up to 15 amps *total*) with the **MFJ-1116**. With meter, switch and 15 amp fuse.
List $54.95 *Order #0171* **$49.95**

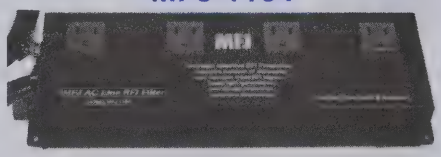
## MFJ-1118

The deluxe **MFJ-1118** features two fused heavy duty binding posts plus six switched light duty posts. Handles 35 amps total. Meter and switch.
List $79.95 *Order #1763* **$72.95**

## MFJ-1128

The **MFJ-1128** DC power strip has 12 outlets. Installed fuses include: three 1 amp, four 5 amp, four 10 amp, one 25 amp, one 35 amp. It has a built-in 0-25 VDC Voltmeter. The ON/OFF switch controls outlets 4 through 12, and handles a total of 20 amps. Outlet 1, 2 and 3 are unswitched and handle 40 amps total. Includes 12 pair of Anderson PowerPole® 24 40 amp contacts, 10 fuses
List $99.95 *Order #1499* **$94.95**

## MFJ-1164



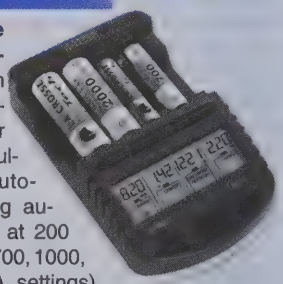
The **MFJ-1164** reduces AC power line RFI, noise, transients, surges generated by computers, motors, RF transmitters, static/lightning by 30 dB and up to 60-80 dB with good earth ground. It provides inductive isolation, capacitive decoupling, RFI rejection, over-voltage protection. MFJ-1164 has four 3-wire, 15 Amp, 120 VAC outlets that are spaced for large adapters. 25 Amps/3000 Watts max. Aluminum case 12 x 3½ x 2 inches.
**MFJ-1164** *Order #4743* **$54.95**

## MFJ-434B

The **MFJ-434B** *Voice Keyer* sends your call and contest exchanges in your own voice! Store frequently used phrases like *CQ Contest, QTH is Ohio* and more. Save your voice! You can store five messages to a total of 75 seconds. You can repeat messages continuously and vary the repeat delay from 3 to 500 seconds. A receive audio jack lets you record and play back off-the-air signals. Plug your 8 pin mic into the MFJ-434B, then the shielded 8 pin output cable into your radio. Internal jumpers let you select Kenwood, Icom, Yaesu, Alinco or Radio Shack rigs. The built-in speaker lets you monitor stored messages. With mini headphone jack. Requires 9-15 VDC, 9 volt battery or optional MFJ-1312D. 6.5 x 2.5 x 6.5".
List $189.95 *Order #1872* **$169.95**

LA CROSSE TECHNOLOGY

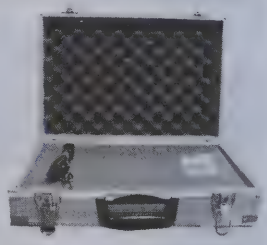
## BC-900



The **La Crosse Technology BC-900** charges both AA and AAA rechargeable NiCD or NiMH batteries simultaneously and automatically. Charging automatically begins at 200 mA (or select 500, 700, 1000, 1500 or 1800 mA settings). Batteries will be discharged and recharged up 20 cycles or until batteries are refreshed to maximum capacity. The four mode display shows voltage, current charge, time elapsed and accumulated capacity. The BC-900 has overheat detection to protect from over-charging. Input voltage is 100-240 VAC via the supplied AC adapter. Includes: a durable carry bag, AC adapter, four NiMH AA cells, four NiMH AAA cells, four C cell adapters and four D cell adapters (use the adapters to convert any AA cell to C or D size). 3 x 5.1 x 1.5 ".
List $79.95 *Order #2264* **$59.95**

MFJ

## MFJ-6404



The **MFJ-6404** is the perfect way to carry your delicate and valuable instruments! This durable plastic case is fitted with foam padding and a customizable 16½ x 10¾ x 1¾ inch foam insert. Store SWR/wattmeters, analyzers, radios, antenna tuners, etc. With a carrying strap and a lock and keys to secure your equipment.
List $39.95 *Order 3817* **$36.95**

## West Mountain Radio

### RIGRUNNER

The **RigRunner** is the most convenient and safest way to connect all your 12 VDC equipment to a power source. Eliminate messy binding posts, frayed wire connections, black tape or short circuits! These 13.8 VDC power panels use the excellent Anderson PowerPole connectors. Standardize all of your 12 VDC connections using the amateur radio ARES and RACES PowerPole system. Each outlet is individually fused with automotive ATC/ATO fuses. Shipped with fuses installed. (ATC/ATO auto fuses are easy to get and are available in 10 values from 1 to 40 amps). Each fuse has a blown fuse LED illuminator to show short circuit problems instantly! LED and audio alerts of safe, over and under voltage conditions. Audio alert is selectable to alarm on over voltage, under voltage or can be disabled. Mounting is easy with supplied 3M Bumpon® protective feet and adhesive pads or screwed down using any #6 or #8 screws (screws not supplied). The panels below include fuses, but are sold without extra PowerPoles or cables (see optional C30/PK/12 and C45/PK/12).

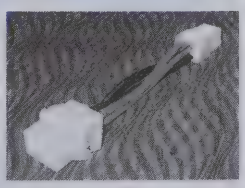
| | | | |
|---|---|---|---|
| #2231 | **RR 4005** | 5 Outlets | $58.95 |
| #2094 | **RR 4008** | 8 Outlets | $79.95 |
| #2282 | **RR 4010S** | 10 Outlets Auto/Man | $109.95 |
| #2229 | **RR 4012** | 12 Outlets | $99.95 |
| #4768 | **RR 8012** | 12 Outlets [80 Amp] | $134.95 |

### RIGRUNNER OPTIONS

| | | | |
|---|---|---|---|
| #2228 | **C30/PK/12** | 12 PowerPoles 30A | $10.49 |
| #3154 | **C45/PK/12** | 12 PowerPoles 45A | $12.49 |
| #3133 | **PS/CBL/6** | 6 Ft Cable to PS | $7.95 |
| #3146 | **EX/CBL/6** | 6 Ft Extension Cable | $8.95 |

## Associated

### ARC119



The handy **Associated ARC119** 4 inch DC power adapter cable converts the IC7000/TS480S 4 pin power plug to accept 6 pin Molex plug.

**ARC-119** *Order #0273* $17.95

## Associated

### ARC LMR100

These extremely flexible 4 foot jumpers are made using very low loss LMR-100 coaxial cable (*not* high loss RG174!).

| | | | |
|---|---|---|---|
| **100-4BU** | BNC Male to PL259 | *#4791* | $17.95 |
| **100-4SU** | SMA Male to PL259 | *#4792* | $17.95 |
| **100-4UU** | PL259 to PL259 | *#4793* | $17.95 |
| **ARC109** | SO-239 to SMA Male | *#4513* | $17.95 |
| **ARC110** | SO-239 to BNC Male | *#4512* | $17.95 |

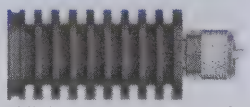
## ON THE AIR SIGN

The Nationwide ON AIR sign features nearly two inch letters that shine bright via the six noise free, replaceable incandescent lamps. When the sign is not actuated, the letters are nearly invisible. The internal sensing circuit remotely trigger the sign's lamps on transmit during either of these conditions:
1. The RCA phono plug wires are shorted together (in the same way you would interface an amp.).
2. +12 volt DC (5 ma), from the transceiver's Remote or Acc. jack, is applied to the RCA phono jack's center pin. An inline diode adapter as well as an RCA jumper cord to facilitate connection to your rig are provided. With AC wall adapter. Made in USA. Natural oak finish. 7.25 x 3.5 x 2 inches.

**Natural Oak** *Order #1574* $69.95

## DIAMOND

### DL-30A

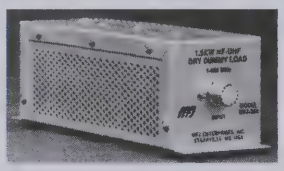


The **Diamond DL-30A** dummy load can be used from 0 to 500 MHz with up to 15 watts continuous. Higher wattage may be carefully used on a noncontinuous basis. For example, up to 100 watts may be used with 30 seconds on and 3 minutes off.

List $27.95 *Order #0359* $24.95

## VCi

### VECTRONICS DL-300M



The **Vectronics DL-300M** dry dummy load simulates an accurate 50 ohm antenna up to 150 MHz at 300 watts (ten seconds). 5"x2"x3".

List $49.95 *Order #3390* $44.95

### LP-30 & LP-2500

The **Vectronics LP-30** low pass filter is used between your transmitter and antenna, or tuner. Power capacity is 1500 watts continuous. Passband is 0 - 30 MHz. Cutoff is 35 MHz. 52 Ohms.

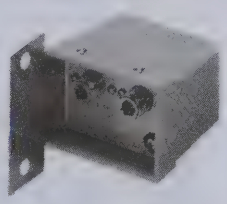
List $79.95 *Order #3388* $69.95

**LP-2500** is similar to LP-30, but 2500 W capacity.

List $149.95 *Order #3389* $129.95

## ICOM

### AG25/35/1200



These low noise GaAs-FET mast mounted transceiver preamps require no power cable since the coaxial cable is also used to carry the DC voltage and T/R switching signals. The following preamps are compatible with select ICOM transceivers only. Please check your Owner's Manual.

| | | | |
|---|---|---|---|
| **AG25** 2 Meters | *Order #1848* | $169.95 |
| **AG35** 440 MHz | *Order #2162* | $179.95 |
| **AG1200** 1.2 GHz | *Order #0000* | Discontinued |

## AMECO

### HP-300T

### HP-75T

These high-pass filters connect to your TV or VCR to help reduce radio interference from CB or ham radios. Each filter has 9 shielded sections, a sharp cut-off at 52 MHz and over 80 dB attenuation below 50 MHz. (These items are not returnable).

The **Ameco HP-300T** version is for 300 ohm twin-lead installations. With screw terminals and 300 ohm lead. (Shown at the top above).

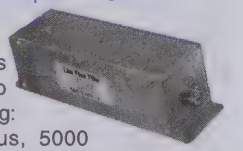
**HP-300T** *Order #2915* $12.95

The **Ameco HP-75T** version is for coax feedline and is ideal for cable TV systems. With connector and short coax jumper cable (F to F).

**HP-75T** *Order #2914* $12.95

## BENCHER, INC.

### YA-1



High-power Low Pass filter. Frequency: 1.8 to 29.7 MHz. Power Rating: 1500 watts continuous, 5000 watts peak. Attenuation: >80 dB at 54 MHz.

List $85.00 *Order #1231* $79.95

## MFJ

### MFJ-264

This dry dummy load will handle 1500 watts for ten seconds or 100 watts for ten minutes. SWR is better than 1.3 : 1 up to 650 MHz.

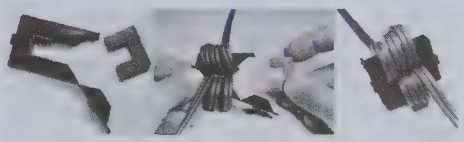
List $74.95 *Order #2256* $69.95

### MFJ-260C

This 50 ohm air-cooled 300 watt dry dummy load will handle a full load for thirty seconds to 30 MHz at 1.1 : 1 or 150 MHz at 1.5 : 1.

List $39.95 *Order #1314* $34.95

### MFJ-701



The **MFJ-701** *Snap-On-Choke* kit allows you to easily eliminate or minimize radio frequency interference (RFI). Just wind your AC cord through the choke. Package of four.

**MFJ-701** *Order #1778* $16.95

**Visit us on the web:**
**www.universal-radio.com**

## ARD9800

The **AOR ARD9800** Digital Voice and Image Interface lets you explore the world of digital communications with your existing transceiver. This device uses the same audio frequencies (300 - 2500 Hz) as microphone audio. The open published (G4GUO) digital protocol means use of the ARD9800 is permitted on the U.S. amateur bands. The ARD9800 automatically recognizes incoming digital signals and starts decoding those signals immediately. Enjoy near-FM quality audio using SSB! And the best news is that you keep your ability to communicate in conventional analog mode as you can easily shift between digital and analog operation. No rig modifications are required. You simply make connection to your transceiver's mic input and speaker output. There is a speaker built into the top cover. Adjust the level via the front panel. [Note: you will have to construct or purchase a cable into your radio's mic jack]. With an optional VM9800 memory module you can send photos or captured video images quickly and easily (*Order #3695* $97.95). View the images through any NTSC monitor [not supplied] that has video input. Just like SSTV but better! Requires 12 VDC at 200 ma. Comes with hand mic, cables and manual. We also offer pre-wired cables for most transceivers. Please see ARD9000/9800 cables on this page.

**ARD9800** *Order #4050* **$519.95**

## ARD9000

The AOR ARD9000 Digital Voice Interface lets you explore the world of digital communications with your existing transceiver. This device uses the same audio frequencies (300 - 2500 Hz) as microphone audio. The open published (G4GUO) digital protocol means use of the ARD9000 is permitted on the U.S. amateur bands. The ARD9000 automatically recognizes incoming digital signals and starts decoding those signals immediately. Enjoy near-FM quality audio using SSB! And the best news is that you keep your ability to communicate in conventional analog mode as you can easily shift between digital and analog operation. No rig modifications are required. You simply make connection to your transceiver's mic input and speaker output. Adjust the level via the front panel. [Note: you will have to construct or purchase a cable into your radio's mic jack]. Requires 12 VDC at 200 ma.

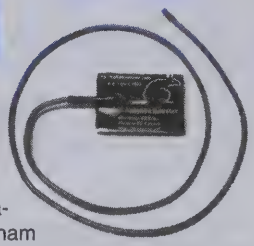
**ARD9000Mk2** *Order #2899* **$339.95**

## RCA-14

The **LDG RCA-14** is a breakout box for the accessory jack on most popular transceivers. It comes with cables with the right DIN plugs and all the outputs are simple RCA jacks. Plug the RCA-14 into your radio's accessory jack and all of your ports are at your finger tips. The RCA-14 comes with a DIN-13, DIN-8, DIN-7, Mini DIN-8 and Mini DIN-6 cables. Compatible with these radios and more: Icom 703, 706, 718, 746, 756, 7000 and 7800. Yaesu 817, 857, 897 and 840. Kenwood 480, 570 and 2000. Ten-Tec Orion and Orion II.

**RCA-14** *Order #0971* **$58.95**

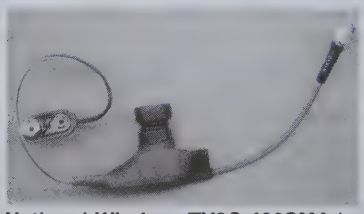
## RAT TAIL



The **RatTail** Antenna Booster is a patented technology. This passive device attaches to a handheld radio operating in the marine, aircraft or 2M ham radio bands. An increase in transmitted energy of 9 to 12db (800% - 1600%) is seen when measured at a distance of 1.2 miles or more. This increase results from a transformation of your radio's 1/4 wave vertical antenna to a 1/2 wave dipole antenna. The LED in the eye of the rat glows red when you find the right place to mount it on your radio. Made in Canada.

**RatTail** *Order #2714* **$29.95**

## National wireless TV3C-433SMA



The **National Wireless TV3C-433SMA** is an ultra-miniature color camera *and* amateur radio transmitter operating on the 434 MHz ham band with 50 mW output. SMA output. Needs a 9 volt battery. Tiny 2.5 x 1 x 0.75 inches. 0.6 ounces.

List $149.00 *Order #4584* **$128.95**

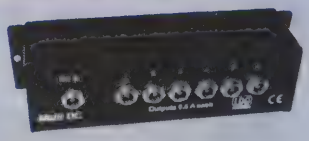
The **National Wireless T104-916/C** as a Part 15 device, operating at 916.5 MHz, does not require a license, but has limited range. Antenna is pigtail.

List $149.00 *Order #2344* **$129.95**

## ARD9000/9800 CABLES

| | | | |
|---|---|---|---|
| *#3323* | **D-6MY** | Yaesu 6 C modular | $29.95 |
| *#3353* | **D-8MI** | Icom 8 C modular | $29.95 |
| *#3322* | **D-8MY** | Yaesu 8 C modular | $29.95 |
| *#0755* | **D-8MK** | Kenwood 8 C modular | $29.95 |
| *#2024* | **M-8MI** | Icom 8 pin mic plug | $29.95 |
| *#3342* | **M-8MK** | Kenwood 8 pin mic plug | $29.95 |
| *#3339* | **M-8MY** | Yaesu 8 pin mic plug | $29.95 |
| *#1483* | **D-80** | To bare wire | $21.95 |

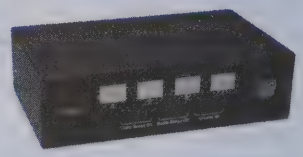
## Multi-DC

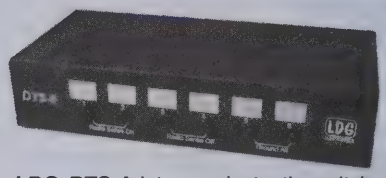


The **LDG Multi-DC** is a 12 VDC distribution box. The provided cables have the right coaxial DC power plug to connect to all your LDG products. The Multi-DC can source up to three amps; each of the six outputs can provide up to 0.5 amps to your LDG accessories. The Multi-DC comes with an input cable, and six output cables, each 3 feet long. The six outputs are organized in three groups of two. Each pair is internally regulated to 12 VDC, thermal protected and short-limited. So, with the Multi-DC, you can easily and safely power your LDG tuners and accessories.

**Multi-DC** *Order #0580* **$48.95**

## DTS-4 DTS-6





The **LDG DTS-4** lets you instantly switch your radio between 4 antennas with the press of a button. A bright red LED shows the antenna in use. All five Teflon SO-239 connectors (4 inputs and one output) are lined up across the back of the switch, so all the coax can run straight back. A bright red LED indicates the antenna in use. At a touch of the control buttons, all inputs are grounded to help protect your radio. The DTS-4 can sense when your transceiver is turned off, and automatically ground all antenna inputs! You simply run a line from a DC-out port on your transceiver. The DTS-4 handles up to 1500 watts of RF power on HF (250 W on 6 M) and can be used with any coax-fed antenna. Requires 12 VDC at 500 . If the external power supply fails, all inputs are grounded, so it's fail-safe. 4.5 x 5 x 3 inches. 1 lb.

**DTS-4** *Order #4670* **$74.95**

The optional **DTS-4R** remote control head lets you remote mount the DTS-4, to the floor or even to the basement. The DTS-4R remote head has a full set of control buttons and indicator lights. A single, slim control cable (not supplied) runs from the DTS-4R back panel to the remote DTS-4 switch.

**DTS-4R** *Order #4673* **$37.95**

The LDG **DTS-6** is similar to the DTS-4, but provides six antenna inputs instead of four.

**DTS-6** *Order #4671* **$94.95**

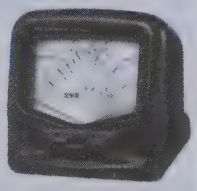
The optional **DTS-6R** remote control head lets you remote mount the DTS-6.

**DTS-6R** *Order #4672* **$46.95**

✔ All of the above items are for **indoor use** only!

# DIAMOND

## SX-20C/SX-40C

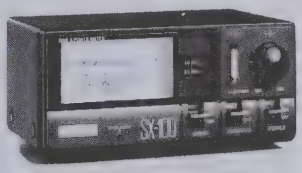


The **Diamond SX-20C** is a compact SWR-power meter featuring cross needle design for measuring SWR and output power simultaneously. The small size makes it ideal for testing mobiles and base installations. Connector type is SO-239. The SX-20C is rated from 3.5-30, 50-54 and 130-150 MHz with ranges of 30 and 300 watts.

The Diamond SX-40C is similar to the SX-20C, but rated from 144-470 MHz with power ranges of 15 and 150 watts. (220 MHz uses a correction factor).

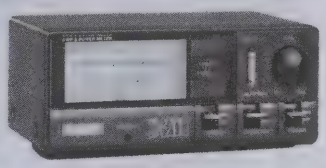
**SX-20C** *Order #1340* **$89.95**
**SX-40C** *Order #1337* **$79.95**

## SX-100



The Diamond **SX-100** precision SWR Power meter covers 1.8 - 60 MHz with power ranges of 30, 300 and 3000 watts. Power measurement accuracy is ±10% with an insertion loss of less than 0.1 dB.
List $144.95 *Order #1673* **$134.95**

## SX-200



The **SX-200** covers 1.8 - 200 MHz in power ranges of 5, 20 and 200 watts. Measurement accuracy is better than ±10%. Insertion loss is < 0.15 dB.
List $99.95 *Order #2315* **$94.95**

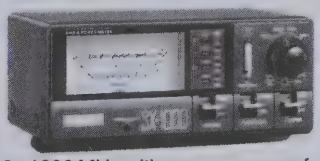
## SX-400

The **SX-400** VHF/UHF SWR/Power meter covers 140 - 525 MHz in ranges of 5, 20 and 200 watts. Measurement accuracy is better than ±10%.
List $119.95 *Order #2785* **$114.95**

## SX-600

The **SX-600** dual-sensor HF/VHF, SWR/Power meter covers the frequency range of 1.8 -160 and 140 - 525 MHz in ranges of 5, 20 and 200 watts. Power accuracy is ±10%. Insertion loss is less than 0.1 dB.
List $179.95 *Order #2698* **$169.95**

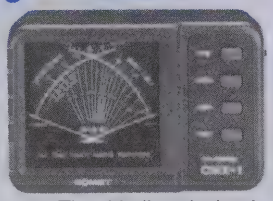
## SX-1000



The **SX-1000** dual-sensor SWR/Power meter covers 1.8 - 160 and 430 - 1300 MHz with power ranges of 5, 20 and 200 watts. Power measurement accuracy is ±10% with an insertion loss of less than 0.2 dB for sensor one (1.8 - 160 MHz) and less than 0.15 dB for sensor two (430 - 1300 MHz).
List $234.95 *Order #1053* **$214.95**

# COMET

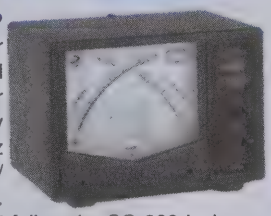
## CMX-1



The **CMX-1** is a remote (6 foot) sensing cross-needle SWR/Power meter for 1.8-30 MHz in 30/300/2000 watt ranges. There is also a DC voltage range. The thin-line design is only 1.7 inches thick, so it is ideal for mobile mounting. With lamp on-off switch. 6 foot sensor.
List $189.95 *Order #0318* **$169.95**
Optional EKS3 extends sensor cable by 17 feet.
**EKS3** *Order #0285* **$26.95**

# DAIWA

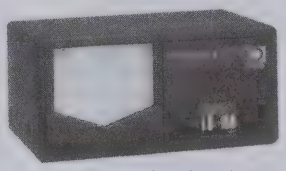
## CN-801HP
## CN-801V



The **Daiwa CN-801HP** cross-needle meter displays both forward and reflected power over a frequency range of 1.8-200 MHz in ranges of 20/200/2000 watts forward. Accuracy is ±10% at full scale. SO-239 jacks.
List $169.95 *Order #1035* **$154.95**

The **Daiwa CN-801V** cross-needle meter displays both forward and reflected power over a frequency range of 140-525 MHz in ranges of 20/200 watts forward. Accuracy is ±10%. SO-239 jacks.
List $154.95 *Order #1326* **$149.95**

## CN-101L



The **Daiwa CN-101L** cross-needle meter displays both forward and reflected power in a range of 1.8-150 MHz in ranges of 15/150/1500 watts forward. Accuracy is ±10%. SO-239 jacks.
List $109.95 *Order #1889* **$89.95**

## CN-103L

The **Daiwa CN-103L** looks like the CN-101L, but is for the VHF/UHF enthusiast. The CN-103L covers 140-450 MHz in ranges of 20/200 watts forward. SO-239 jacks.
List $109.95 *Order #2253* **$89.95**

## CN-103LN

The **Daiwa CN-103LN** is identical to the CN103L, but features N connectors rather than SO-239s.
List $115.95 *Order #0182* **$99.95**

# MFJ

## MFJ-860

The **MFJ-860** cross-needle meter reads forward and reflected power and SWR simultaneously for 1.8 to 60 MHz up to 300 watts. Power ranges: 30/300 watts forward and 6/60 watts reflected. SO-239 jacks. For meter illumination use 12 VDC or optional MFJ-1312D adapter. 4.5x2.25x3 inches.
List $49.95 *Order #0977* **$44.95**

# VCi VECTRONICS

## PM30HF

The **PM30** measures and displays forward power, reflected power and SWR simultaneously on its dual movement meter system in the range of 1.8 to 60 MHz with 300 and 3000 watt settings.
List $79.95 *Order #3393* **$69.95**

## PM30UVB

The **PM30UVB** measures and displays forward power, reflected power and SWR simultaneously in the range of 100 - 500 MHz with 30 and 300 watt settings. It utilizes BNC jacks for low loss.
List $89.95 *Order #3394* **$80.95**

## PM30UV

The **PM30UV** is the same as the PM30UVB above, but utilizes SO-239 jacks instead of BNC.
List $89.95 *Order #3581* **$79.95**

# BIRD

## 43

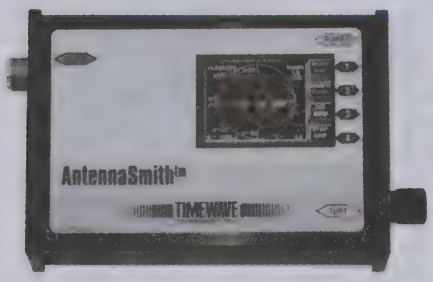
The **Bird Model 43** thruline directional wattmeter is a portable insertion-type instrument for measuring forward and reflected power in coaxial transmission lines. It will accurately measure RF power under any load condition. Plug-in elements are available to fit your frequency and power needs. Call for unlisted elements.

**Bird 43 UHF** *Order #1739* **$309.95**
**Bird 43 N** *Order #1738* **$314.95**

**50H Element** 50 watt 2 - 30 MHz. *Order #1743* **$91.95**
**250H Element** 250 watt 2 - 30 MHz. *Order #1749* **$91.95**
**500H Element** 500 watt 2 - 30 MHz. *Order #1764* **$91.95**
**1000H Element** 1000 watt 2 - 30 MHz. *Order #1750* **$91.95**
**5000H Element** 5000 watt 2 - 30 MHz. *Order #1761* **$131.95**
**10000H Element** 10000 watt 2 - 30 MHz. *Order #3864* **$229.95**
**25C Element** 25 watt 100 - 250 MHz. *Order #1736* **$74.95**
**50C Element** 50 watt 100 - 250 MHz. *Order #1741* **$74.95**
**100C Element** 100 watt 100 - 250 MHz. *Order #1744* **$74.95**
**500C Element** 500 watt 100 - 250 MHz. *Order #0243* **$74.95**
**50E Element** 50 watt 400 - 1000 MHz. *Order #0809* **$74.95**
**CC6 Carry Case** for 43 meter and 7 elements. *Order #4480* **$99.95**
**EC1 Carry Case** for 12 elements. *Order #2904* **$51.95**

TIMEWAVE TECHNOLOGY INC.

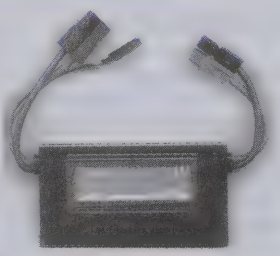
## TZ-900




Day or night, the **Timewave TZ-900** AntennaSmith™ is a bright colorful window to your antenna system. The transreflective TFT LCD color display is brilliantly visible in direct sunlight - no lost data from a washed-out display! The AntennaSmith™'s rapid sweep updates the data graph every two seconds. Quickly set the start, stop or center frequencies to see the data as you want it. A tap on a button gives you a different parameter. Tap another button to store a graph to print later or to display as a reference while you optimize your antenna system. Instantly see the effect of an adjustment or a change! No computer connection is required to see all the graphs - even the Smith chart! The TZ-900 has an adjustable frequency cursor/generator. Quickly tune the cursor to check your antenna system at the desired frequency while looking at the big picture on a graph. The Direct Digital Synthesizer makes a great RF signal generator in the Synthesizer mode. Easily calibrates to WWV with 1 Hz frequency resolution. Operates from 0.2 MHz to 55 MHz. The included Windows program lets you display, compare and export your data. Use your PC or laptop to run the AntennaSmith™ for quick printed reports. The AntennaSmith™ has a rugged extruded aluminum case and batteries for hours of field operation. A 12 VDC power supply/charger (117VAC/60Hz) is included. The TZ-900 has SO239 input.

List $1399.95 *Order #1719* **$1199.95**

## West Mountain Radio



The **West Mountain Whatt Meter** with PowerPoles is a small, convenient LCD meter that simultaneously displays and reads, Volts, Amps, Watts and A/hrs. This meter requires no battery, as it draws its power (17 ma) from the voltage source. It has been a favorite with the electric powered aircraft and battlebot crowd, and is now available to the ham community. A nice addition to your West Mountain RigRunner (see page 73). Max voltage: 60 volts, Min voltage: 4 volts, Max amps: 70, Max watts: 4200 watts, Max A/Hr 94 amp/hours. Only 2.25 x 4.25 x 0.94 inches.

**WHATTMETER** *Order #2523* **$69.95**

LDG ELECTRONICS

## FT METER

The **LDG FT Meter** takes advantage of the meter jack on front of the FT-857 and FT-897. The FT-Meter presents a lush, highly readable 2.5 inch meter face with calibrated scales for signal strength and discriminator reading on receive, and power output, SWR, modulation, ALC action and supply voltage on transmit. Each function is selectable from the radio's menu. Easily visible from anywhere on your desk or dash, the FT-Meter is illuminated by any external 12 VDC source.

List $49.00 *Order #1198* **$48.95**

## TW-1

The **LDG TW-1** provides an aural spoken indication of power and SWR using a digitally recorded voice. It is ideal for the vision-impaired, for those of us in the "bifocal set", or just for those times when you need to be looking somewhere else. At the press of a button, the TW-1 speaks the forward power, reverse power or SWR. Three languages are available: English, Spanish and German. It includes its own internal top firing speaker; no external audio hookups are needed. The TW-1 also offers a continuous tone mode for tuning. Simply press and hold the Forward button, and a tone indicates power. As you adjust your amplifier or antenna tuner, a higher tone indicates higher power. This is just the thing for peaking your amplifier while keeping a close watch on the grid current. You can select either long or short voice reports. Long reports include descriptors like *thousand* or *hundred* and end with *forward watts* or *reverse watts*. Short reports speak only the numerical value of the measurement you've selected for a quick reading. The TW-1 needs just 1 watts to operate, but will handle up to 2000 watts PEP. The TW-1 is accurate to ± 5% of reading across the entire power range; this may very well be the most accurate wattmeter you own. Resolution is 1 watt or 1% of reading (whichever is higher). The TW-1 requires 11 – 15 volts DC at 200 mA maximum, but consumes almost no current when not speaking.

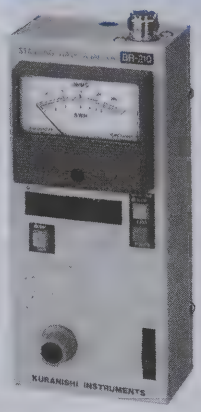
List $149.00 *Order #3898* **$139.95**

The **LDG TW-2** VHF-UHF version is similar but covers 50 MHz, 144MHz, 220 MHz and 440 MHz (instead of HF). It will handle up to 250 watts with a resolution of 0.1 watt and ±5% accuracy.

List $149.00 *Order #4669* **$141.95**

KURANISHI INSTRUMENTS LTD.

## BR-210




The **Kuranishi BR-210** antenna analyzer is a professional class instrument for measuring SWR, resonance and impedance. It features a highly sensitive, high precision Yokogawa meter for measurement accuracy in six ranges covering 1.8 to 170 MHz. Impedance is 12.5 to 300 ohms. VSWR 1:1 to infinity. Digital readout accurate to 1 kHz. The decimal point will blink when the batteries are low. An OVER LED indicates an out of range condition. The BR-210 follows on the success of the BR-200 but, with these changes: 1. The SO-239 connector has been moved to the top of the case. 2. The toggle switch to change from impedance to SWR measurement has been moved to the front of the case. 3. The power/gate time sliding switch has been changed to push button switches. The BR-210 will operate for up to 14 hours from six AA cells (not supplied) or from an external 12 VDC source. The SO239 input jack accepts a PL259. Comes with wrist strap, DC power cable and 50 ohm dummy load.

List $499.95 *Order #2097* **$409.95**

MFJ

## MFJ-886

The compact **MFJ-886** frequency counter covers 1 MHz to 3 GHz. It has a high speed 300 MHz direct count with 0.1 Hz-per-second resolution. An easy to read 2 inch wide, 10 digit LCD is featured. The display also has a ultra sensitive synchronous detector RF signal strength bar graph. Buttons for HOLD and GATE are featured along with a range switch to select 300 MHz or 3 GHz. BNC input is 50 ohms. Sensitivity is 0.8 mV @100 MHz, 7 mV @300 MHz, 6 mV @1 GHz and 100 mV @2.4 GHz. Maximum input of 15 dBm. With an AC charger, NiCad pack and BNC telescopic antenna. 2.75 x 3.25 x 1.25 inches.

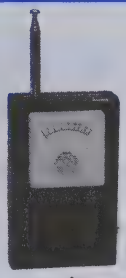
**MFJ-886** *Order #0815* **$114.95**

## MFJ-888

The **MFJ-888** frequency counter covers 10 Hz to 3 GHz with a ten digit LCD and ultra-sensitive synchronous detector with 16 section bar graph to show RF signal strength. With charger, NiCads and BNC antenna.

*Order #3172* **$174.95**

## MFJ-801



The **MFJ-801** field strength meter show the strength of the actual field being radiated from your antenna. Usable from 100 kHz to 500 MHz. Has nonremovable 20 inch telescopic antenna. 2.4 x 3.7 x 1.
List $24.95 *Order #1015* **$22.95**

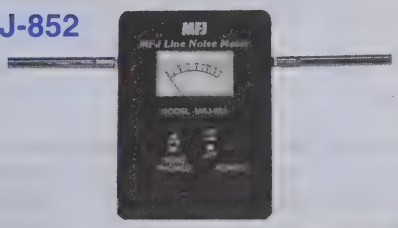
## MFJ-802

The **MFJ-802** field strength meter shows the strength of the actual field being radiated from your antenna. You can use it to determine the basic radiation pattern of your antenna and instantly know if it radiates better or worse. You can check for RF floating around the shack that may be caused by faulty antennas or poorly shielded equipment. For 100 kHz to 500 MHz. The telescoping 40 inch dipole antenna reduces influence of surrounding objects.
List $44.95 *Order #0837* **$39.95**

## MFJ-816

The **MFJ-816** HF SWR-wattmeter lets you read forward and reflected power from 1.8 to 30 MHz in ranges of 30 and 300 watts.
List $39.95 *Order #1214* **$34.95**

## MFJ-852

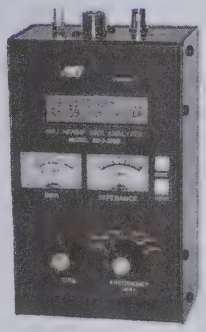


The **MFJ-852** Power Line Noise Meter lets you search out leaky insulators, loose hardware and corroded ground lines quickly. You can track the noise source right down to the pole, transformer or insulator. You can also pinpoint faulty dimmers, electric fence arcs, sparking power equipment, neon signs and more! The MFJ-852 is a sensitive superhet AM receiver with a noise field strength meter. A telescopic, direction-finding dipole antenna is balun isolated and optimized. This gives you a sharp, clearly defined null for accurately pinpointing noise sources quickly and easily. It operates in the 135 MHz region when activity is a minimum and radiation from corona and arcing is far more localized. 0.3 µV sensitivity and wide-range AGC give you an ultra wide range noise level meter - over 70dB! Plug in mono headphones and hear the noise you're tracking or plug-in a tape recorder (headphones and tape recorder not supplied). Requires a 9Vbattery (not supplied).
List $109.95 *Order #4030* **$99.95**

## MFJ-868

The MFJ-868 is an absolutely huge peak reading HF SWR/Wattmeter measuring 6.5 inches diagonally. 20/200/2000 Watt ranges. SO239 I/O.
List $139.95 *Order #1853* **$129.95**

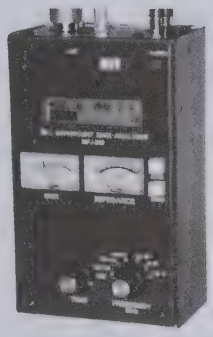
## MFJ-259B



This **MFJ-259B** SWR analyzer features a built-in 10 digit high-contrast LCD frequency counter. Reading your antenna's SWR and finding its resonance has never been easier. All you do is connect your antenna, set your SWR analyzer to the frequency you want and read your SWR. Frequency coverage is from 1.8 to 170 MHz. Find your antenna's resonant frequency at your feedline, monitor your SWR as you adjust your beam or vertical. Shorten or lengthen your dipole to see the effect immediately. Includes a built-in RF Resistance Meter. Uses ten AA cells or MFJ-1312D PS (both optional). The optional MFJ-99 Accessory Kit includes case, dip Coils and PS.
List $279.95 *Order #1611* **$239.95**

| | | |
|---|---|---|
| **MFJ-29C** Case | *Order #0686* | **$22.95** |
| **MFJ-66** Dip Coils | *Order #1186* | **$24.95** |
| **MFJ-99** Acc Kit | *Order #2104* | **$56.95** |
| **MFJ-1312D** PS | *Order #2433* | **$15.95** |

## MFJ-269

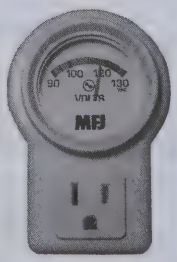


The **MFJ-269** is similar in looks and function to the MFJ-259B, but also covers 415-470 MHz plus a 12 bit A/D converter for greater accuracy. Requires ten AA NiMH or NiCad cells (not included).
*Order #4025* **$339.95**

## MFJ-224

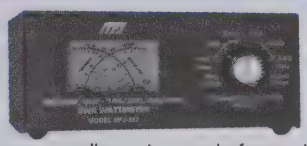
Use the **MFJ-224** 2 Meter FM Analyzer to tune any signal between 143.5-148.5 MHz to monitor field strength in dBm and FM deviation in kHz. Requires a 9 volt battery (not supplied).
*Order #2636* **$159.95**

## MFJ-850B



The **MFJ-850B** Line Voltage Meter helps you see low voltage "Brown out" conditions and surges that can damage your expensive electrical equipment by letting you see line voltage dips. The MFJ-850B shows line voltage with a color coded scale that reads voltage from 95 - 135 volts with 2% accuracy. It measures a compact 2.25 x 2.25 x 1.5 inches and simply plugs into an AC outlet.
List $24.95 *Order #1849* **$22.95**

## MFJ-862



The **MFJ-862** cross-needle meter reads forward and reflected power and SWR simultaneously. This meter covers 144/220/440 MHz. Ranges: 30/300 watts forward and 6/60 watts reflected. Each power range for each band is individually calibrated. Single knob operation makes it easy to use. For meter illuminations use 12 VDC or optional MFJ-1312D (*Order #2433* $15.95).
List $59.95 *Order #0284* **$53.95**

## MFJ-207

See the resonant frequency of your antenna without using a transmitter, SWR meter or any other equipment. A frequency counter output is provided for precise digital readout. Coverage is 10 - 160 meters. Requires 9V battery (not supplied) or optional MFJ-1312D.
*Order #2679* **$94.95**

## MFJ-208

The same features of the MFJ-207, but over the frequency range of 138 to 156 MHz.
List $99.95 *Order #0244* **$94.95**

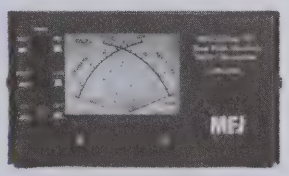
## MFJ-209

The same features of the MFJ-207 over the frequency range of 1.8 to 170 MHz.
List $149.95 *Order #3122* **$139.95**

## MFJ-249B

All the features of the MFJ-259B without a built-in RF Resistance Meter.
List $259.95 *Order #3101* **$229.95**

## MFJ-815C



The **MFJ-815C** cross-needle peak-reading power meter allows you to monitor both forward and reflected power simultaneously. There are buttons to select either Peak or Average reading and power ranges of 300/3000 watts forward and 60/600 watts reflected. Frequency coverage is 1.8 to 30 MHz. The average power is measured when the PEAK/AVG button is out. Peak envelope power (PEP) is measured when the PEAK/AVG button is pushed in. The Peak Reading function of this meter requires external 12 VDC or a 9 volt battery (not supplied) to operate. See MFJ-1312D sold separately. Please note that the meter lamps will function with external 12 VDC, but not from the 9 volt battery. The rear panel features SO-239 connectors for input and output. ◆
List $89.95 *Order #1865* **$82.95**

➤ Please visit our website for more MFJ meters.
**www.universal-radio.com**

cushcraft

## BEAM ANTENNAS

You may view these antennas at:
www.universal-radio.com

| Model | Frequency | Elements | Forw. Gain | Boom | Weight | Wind L. | Order # | List Price | Your Price |
|---|---|---|---|---|---|---|---|---|---|
| A3S | 20/15/10 Meters | 3 Element | 8.0 dB | 14.0 Feet | 27 Lbs | 4.4 sq/ft | #2779 | $704.38 | $559.95 |
| A4S | 20/15/10 Meters | 4 Element | 8.9 dB | 18.0 Feet | 37 Lbs | 5.5 sq/ft | #0333 | 883.08 | 699.95 |
| A3WS | 17/12 Meters | 3 Element | 8.0 dB | 14.0 Feet | 23 Lbs | 4.1 sq/ft | #0806 | 576.89 | 459.95 |
| A627013S | 6/2M/70cm | 3 Element | 8/8/10 dB | 7.3 Feet | 9.5 Lbs | 2.5 sq/ft | #1333 | 312.60 | 259.95 |
| MA5B | 20/17/15/12/10M | | | 7.3 Feet | 27 Lbs | 3.2 sq/ft | #3148 | 565.43 | 449.95 |
| X7 | 20/15/10 Meters | 7 Element | 12.5 dB | 18.0 Feet | 60 Lbs | 7.9 sq/ft | #1793 | 1062.94 | 879.95 |
| TEN-3 | 28-29.7 MHz | 3 Element | 8.0 dB | 8.0 Feet | 10 Lbs | 2.0 sq/ft | #2740 | 325.09 | 269.95 |
| A50-3S | 50-54 MHz | 3 Element | 8.0 dB | 6.0 Feet | 7 Lbs | 1.8 sq/ft | #1405 | 154.58 | 129.95 |
| A50-5S | 50-54 MHz | 5 Element | 10.5 dB | 12.0 Feet | 11 Lbs | 2.9 sq/ft | #1406 | 255.76 | 209.95 |
| A50-6S | 50-54 MHz | 6 Element | 11.6 dB | 20.0 Feet | 18 Lbs | 4.5 sq/ft | #1407 | 427.19 | 349.95 |
| A148-3S | 144-148 MHz | 3 Element | 7.8 dB | 2.8 Feet | 1.5 Lbs | 0.3 sq/ft | #0685 | 77.61 | 69.95 |
| A148-10S | 144-148 MHz | 10 Element | 13.2 dB | 12.0 Feet | 6 Lbs | 1.2 sq/ft | #1961 | 138.89 | 109.95 |
| A148-20T | 144-148 MHz | 20 Element | 11.1 dB | 11.0 Feet | 7 Lbs | .4 sq/ft | #1940 | 217.32 | 179.95 |
| 13B2 | 144-148 MHz | 13 Element | 15.8 dB | 15.0 Feet | 7 Lbs | 1.8 sq/ft | #1357 | 251.10 | 199.95 |
| 17B2 | 144-145 MHz | 17 Element | 18.0 dB | 31.0 Feet | 16 Lbs | 3.9 sq/ft | #1668 | 401.96 | 339.95 |
| 26B2 | 144-148 MHz | 26 Element | 18.8 dB | 15.0 Feet | 22 Lbs | 4.9 sq/ft | #0836 | 663.40 | 549.95 |
| 124WB | 144-148 MHz | 4 Element | 10.2 dB | 4.0 Feet | 3 Lbs | .4 sq/ft | #2905 | 119.28 | 99.95 |
| A270- 6S | 144-148/430-450 | 6 Element | 7.8/7.8 dB | 2.8 Feet | 1.7 Lbs | .3 sq/ft | #0158 | 110.94 | 89.95 |
| A270-10S | 144-148/430-450 | 10 Element | 10/10.0 dB | 6.2 Feet | 1.8 Lbs | .7 sq/ft | #2402 | 146.44 | 119.95 |
| 224WB | 222-225 MHz | 4 Element | 10.2 dB | 3.0 Feet | 1.7 Lbs | .3 sq/ft | #2821 | 96.41 | 84.95 |
| A449- 6S | 440-450 MHz | 6 Element | 10.5 dB | 2.9 Feet | 3.0 Lbs | .3 sq/ft | #0628 | 73.52 | 59.95 |
| A449-11S | 440-450 MHz | 11 Element | 13.2 dB | 4.2 Feet | 4.0 Lbs | .4 sq/ft | #0629 | 112.76 | 99.95 |
| 719B | 430-450 MHz | 19 Element | 15.5 dB | 13.5 Feet | 5.6 Lbs | 1.2 sq/ft | #0711 | 232.02 | 199.95 |

cushcraft

## VERTICAL ANTENNAS

| Model | Frequency | Gain | Height | Weight | Wind L. | Order # | List Price | Your Price |
|---|---|---|---|---|---|---|---|---|
| R8 | 40/30/20/17/15/12/10/6M | 3.0 dB | 28.5 Feet | 23 Lbs | | #0520 | $709.84 | $579.95 |
| R6000 | 20/17/15/12/10/6M | 3.0 dB | 19.0 Feet | 12.5 Lbs | 1.5 sq.ft. | #0869 | 465.57 | 389.95 |
| MA5V | 20/17/15/12/10M | 1.0-2.0 dB | 14.7 Feet | 6.5 Lbs | 0.9 sq.ft. | #4287 | 353.31 | 289.95 |
| MA6V | 20/17/15/12/10/6M | 1.0-2.0 dB | 14.7 Feet | 6.9 Lbs | 0.9 sq.ft. | #0849 | 415.52 | 339.95 |
| AR10 | 28-29.7 MHz | 3.7 dB | 17.6 Feet | 4.0 Lbs | 1.7 sq.ft. | #0635 | 111.83 | 94.95 |
| AR6 | 50-54 MHz | 3.7 dB | 10.1 Feet | 2.5 Lbs | 0.4 sq.ft. | #0634 | 107.43 | 89.95 |
| AR2 | 135-160 MHz | 3.0 dB | 3.9 Feet | 1.5 Lbs | 0.2 sq.ft. | #0633 | 65.79 | 54.95 |
| ARX2B | 135-160 MHz | 7.0 dB | 14.0 Feet | 6.0 Lbs | 0.5 sq.ft. | #0642 | 93.91 | 79.95 |
| ARX220B | 222-225 MHz | 7.0 dB | 9.3 Feet | 5.0 Lbs | 0.3 sq.ft. | #0644 | 93.91 | 79.95 |
| AR270 | 144-148/430-450 MHz | 3.7/5.5 dB | 3.8 Feet | 2.0 Lbs | 0.3 sq.ft. | #0583 | 130.17 | 109.95 |
| AR270B | 144-148/430-450 MHz | 5.5/7.5 dB | 7.7 Feet | 2.4 Lbs | 0.5 sq.ft. | #1960 | 136.80 | 119.95 |
| AR450 | 440-460 MHz | 3.7 dB | 1.4 Feet | 1.0 Lbs | 0.1 sq.ft. | #0637 | 45.02 | 39.95 |
| ARX450B | 435-450 MHz | 7.0 dB | 4.9 Feet | 1.0 Lbs | 0.2 sq.ft. | #0645 | 93.91 | 79.95 |

### CS270M

The **Cushcraft CS270M** dual band antenna has 3.7 dB gain on 2 meters and 6 dB gain on 440 MHz. With magnetic base on protective pad, brass hardware and low-loss double shielded Teflon coax terminating to a PL259. 37 inches high.
List $98.45 *Order #1352* **$79.95**

### 5VB

The **Cushcraft 5VB** vinyl connector boots come in a package of 5 along with silicone grease for each.
*Order #0503* **$14.95**

GAP ANTENNA PRODUCTS

Universal is pleased to offer Gap antennas. Because of their large size, they are available for showroom pickup only.

| | | |
|---|---|---|
| **Challenger DX** HF Vertical | *Order #4214* | |
| 80/40/20/15/12/10/6/2 Meters | | **$294.95** |
| **Eagle DX** HF Vertical | *Order #4216* | |
| 40/20/17/15/12/10 Meters | | **$324.95** |
| **Titan DX** HF Vertical | *Order #4213* | |
| 80/40/30/20/17/15/10 Meters | | **$349.95** |
| **Voyager DX** HF Vertical | *Order #4215* | |
| 160/80/40/20 Meters | | **$429.95** |

UNADILLA

### W2AU BALUNS

1:1 ratio balun for dipole antennas. Matches 50-75 Ohm coax lines to 50-75 Ohm load. Frequency: 1.8 to 40 MHz. Power Rating: 2000 watts PEP.

| | | |
|---|---|---|
| **1:1 Balun** | *Order #2076* | **$22.95** |
| **4:1 Balun** | *Order #1888* | **$21.95** |

### W2DU HF BALUN

Maxi-Balun 1:1 ratio for dipole antennas. Frequency: 1.8 to 30 MHz Power Rating: 5000 watts.
List $25.00 *Order #2452* **$23.95**

## G3-144

An affordable 2 meter base vertical. Up to 200 watts. Gain is 3 dB. 7.5 ft.
List $70.40 *Order #0259* **$59.95**

## G7-144

A high-performance 2 meter vertical for fixed station or repeater operation. Up to 600 watts. N-fitting. Gain is 7 dB. 15.3 ft. 10 lbs.
List $209.95 *Order #1972* **$189.95**

## G6-144B

Solid construction and dependable performance make this antenna popular for 2 meter repeater applications. Up to 600 watts. SO-239. Gain is 6 dB. 9.9 ft. 6.8 lbs.
List $149.95 *Order #1971* **$129.95**

## G6-270R

Experience superior fixed station or repeater performance with this VHF/UHF fiberglass vertical antenna. 144-148/430-450 MHz 100 Watts. Gain: 6 dB. 102 inches 6 lbs.
List $208.95 *Order #2918* **$199.95**

## 6-BTV

Constructed of 1¼" heavy wall aluminum this six band trap vertical will handle the full legal limit of power on SSB or CW. For: 10, 15, 20, 30, 40 and 75/80 meters. 24 ft. 16.5 lbs.
List $246.95 *Order #2012* **$219.95**

## 5-BTV

You will have full-band coverage on 10-40 meters (1.6:1 at band edges typical) with this five band trap vertical. For: 10, 15, 20, 40 and 75/80 meters. 24.5 ft. 17 lbs.
List $211.95 *Order #2011* **$189.95**

## 4-BTV

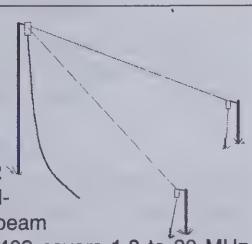
This four band trap vertical features exceptional mechanical construction and full-band coverage (typical SWR 1.6:1 at band edges). For: 10, 15, 20 and 40 meters. 21.5 ft. 15 lbs.
List $166.95 *Order #2010* **$149.95**

## 30-MTK

30 meter add-on kit for the 4BTV or the 5BTV.
List $45.00 *Order #2021* **$39.95**

TEN-TEC

## 3402 3403



The **Ten-Tec 3402** and **3403** are broadband terminated vee beam wire antennas. The 3402 covers 1.8 to 30 MHz and the 3403 covers 3.5 to 30 MHz. 100 watts continuous. SO-239.

**3402** *Order #3540* **$248.95**
**3403** *Order #3527* **$238.95**

## CGT-144

2 meter collinear trunk lip mount mobile antenna. Gain: 5.2 dB. Length: 7.1 ft. (2.2 m).
List $55.50 *Order #1967* **$48.95**

## CGT-220

220 MHz collinear trunk lip mount mobile antenna. Gain: 5.2 dB. Length: 4.9 ft. (1.5 m).
List $55.50 *Order #1968* **$48.95**

## MX-2

2 meter 5/8 wave magnetic mount mobile antenna with coax to PL259. 200W Gain: 3.4 dB. 55 inches.
List $34.95 *Order #4479* **$29.95**

## MX-270

2 meter/440 magnetic mount mobile antenna with coax to PL259. 200W 2.4/4.0dB. 44 inches.
List $59.95 *Order #4507* **$52.95**

## RX-2

2 meter 5/8 wave magnetic mount mobile antenna with coax to PL259. 100W Gain: 3.4 dB. 50 inches.
List $26.75 *Order #0528* **$22.95**

## SF-2

2 meter 5/8 wave "Buckbuster" mobile antenna. Gain: 3.4 dB. Height: 50 inches (1.3m).
List $16.00 *Order #1999* **$14.95**

## SF-220

220 MHz 5/8 wave mobile antenna. Gain: 3.4 dB. Height: 31 inches (78 cm).
List $16.00 *Order #0834* **$14.95**

## MKR-2

Radial Kit to convert mobile antennas to fixed station operation.
List $22.50 *Order #1977* **$17.95**

## Accessories

These mounts accept a 3/8" 24 thread antenna.

| Order # | Model | Item Description | List Price | Your Price |
|---|---|---|---|---|
| 2067 | GCM-1 | Gutter Clip Mount with 180° Swivel | $12.95 | $12.95 |
| 1975 | HLM | Adjustable Trunk Lip Mount & 17' coax | 24.50 | 19.95 |
| 1976 | HOT | Quick Disconnect Trunk Mount & 17' coax | 25.50 | 20.95 |
| 2556 | MBM | Magnetic Mount & 16' coax | 21.50 | 18.95 |
| 0187 | RVM | RV Mount with 180° Swivel & 17' coax | 20.95 | 18.95 |
| 2007 | TLM | Trunk Lip Mount & 17' coax | 23.59 | 19.95 |

HUSTLER

## Mobile HF Antennas

### Standard Resonators (400W)

| Order # | Model | Item Description | Approx. Bandwidth | List Price | Your Price |
|---|---|---|---|---|---|
| 1984 | RM-10 | 10 Meter Resonator | 150-250 kHz | $16.95 | $14.95 |
| 2142 | RM-12 | 12 Meter Resonator | | 16.95 | 14.95 |
| 1987 | RM-15 | 15 Meter Resonator | 100-150 kHz | 16.95 | 14.95 |
| 2363 | RM-17 | 17Meter Resonator | | 23.95 | 19.95 |
| 1989 | RM-20 | 20 Meter Resonator | 80-100 kHz | 23.95 | 19.95 |
| 1991 | RM-30 | 30 Meter Resonator | 50-60 kHz | 26.95 | 22.95 |
| 1992 | RM-40 | 40 Meter Resonator | 40-50 kHz | 26.95 | 22.95 |
| 2782 | RM-60 | 60 Meter Resonator | | 28.95 | 24.95 |
| 2696 | RM-75 | 75 Meter Resonator | 25-30 kHz | 28.95 | 24.95 |
| 2825 | RM-80 | 80 Meter Resonator | 25-30 kHz | 28.95 | 24.95 |

### Super Resonators (1KW)

| Order # | Model | Item Description | Approx. Bandwidth | List Price | Your Price |
|---|---|---|---|---|---|
| 1985 | RM-10-S | 10 Meter Resonator | 250-400 kHz | $25.95 | $19.95 |
| 1988 | RM-15-S | 15 Meter Resonator | 150-200 kHz | 26.95 | 22.95 |
| 1990 | RM-20-S | 20 Meter Resonator | 100-150 kHz | 30.95 | 26.95 |
| 2463 | RM-40-S | 40 Meter Resonator | 50-80 kHz | 38.95 | 31.95 |
| 1697 | RM-75-S | 75 Meter Resonator | 50-60 kHz | 53.95 | 48.95 |
| 2411 | RM-80-S | 80 Meter Resonator | 50-60 kHz | 53.95 | 48.95 |

### Accessories

| Order # | Model | Item Description | List Price | Your Price |
|---|---|---|---|---|
| 1963 | BM-1 | Bumper Mount | $23.50 | $19.95 |
| 1964 | C-29 | Stainless Steel Spring 3/8" 24 | 19.50 | 15.95 |
| 1944 | C-30 | Chrome Plated Spring 3/8" 24 | 12.50 | 10.95 |
| 1965 | C-32 | Chrome Plated Ball Mount | 12.50 | 10.95 |
| 1981 | MO-1 | Mobile Mast 15" Fold Point | 33.95 | 28.95 |
| 1982 | MO-2 | Mobile Mast 27" Fold Point | 33.95 | 28.95 |
| 1206 | MO-3 | 54" Mobile Mast | 25.50 | 24.95 |
| 2120 | MO-4 | 22" Mobile Mast | 21.50 | 17.95 |
| 0696 | QD-2 | Quick Disconnect 3/8" 24 | 21.35 | 18.95 |
| 2306 | RSS-2 | Resonator Spring 3/8" 24 | 12.95 | 9.95 |
| 0187 | RVM | RV Mount with Swival Ball | 20.95 | 18.95 |
| 2003 | SSM-1 | Ball Mount and Spring | 49.95 | 39.95 |
| 2004 | SSM-2 | Ball Mount | 28.95 | 22.95 |
| 2005 | SSM-3 | Stainless Steel Spring 3/8" 24 | 26.95 | 20.95 |

# DIAMOND

## VHF/UHF Base Antennas

### F-23A

High-performance 5/8 wave 2 meter vertical antenna. Gain: 7.8 dB. Power rating: 200 watts Length: 178.3" Weight: 8 lbs. Connector: UHF.
List $129.95 *Order #2235* **$119.95**

### X-50A

Compact dual-band vertical antenna. Frequency: 2 meter and 70cm. Gain: 4.5 dB (2m), 7.2 dB (70cm) Power rating: 200 watts Length: 67" Weight: 2.3 lbs. Connector: UHF.
List $109.95 *Order #2553* **$99.95**

### X-200A

High-performance dual-band vertical antenna for fixed station or repeater operation. Frequency: 2 meter and 70cm. Gain: 6.0 dB (2m), 8.0 dB. (70cm) Power rating: 200 watts Length: 98.4" (2.5m) Weight: 2.6 lbs (1.2 kg). Connector: UHF.
List $149.95 *Order #2341* **$139.95**

### X-510NA

This high-gain dual-band vertical antenna is ideal for high-performance base station or repeater operation. Frequency: 2 meter and 70cm. Gain: 8.3 dB. (2m), 11.7 dB. (70cm) Power rating: 200 watts Length: 204.7" Weight: 5.3 lbs. Connector: N. Wind Survival: 90 MPH.
List $195.95 *Order #2448* **$189.95**

### X-500HNA

The X500H combines the same performance specifications as the X500A with commercial quality construction for 130 MPH wind survival. A good choice for high tower installations. Connector: N
List $259.95 *Order #0178* **$239.95**

### X-700HA

This maximum performance dual-band vertical antenna features the highest gain available. Frequency: 2 meter and 70cm. Gain: 9.3dB. (2m), 13.0 dB. (70cm) Power rating: 200 watts Length: 24' (7.3m) Weight: 12 lbs (5.4 kg). Connector: UHF. Wind Survival: 90 MPH.
List $399.95 *Order #2609* **$399.95**

### V-2000A

A true high-performance 2 meter, 6 meter and 70cm triband vertical antenna. Frequency: 2 meter, 6 meter and 70cm. Gain: 6.2 dB. (2m), 2.15 dB. (6m), 8.4 dB. (70cm) Power rating: 150 watts Length: 98.4" Weight: 2.65 lbs. Connector: UHF.
List $172.95 *Order #0153* **$149.95**

- Base antennas are constructed with a rugged fiberglass sheath and stainless steel hardware.
- For Diamond antennas and accessories not listed, please call or visit our website.
- Installing any base antenna can be dangerous! Request our free *Antenna Safety* pamphlet.

## VHF/UHF Mobile Antennas

### NR-770HNMO

High-performance 2 meter/70cm dual-band mobile antenna. Gain: 3.0 dB/5.5dB. Power rating: 200 watts. Length: 39" Weight: .46 lbs Mount: NMO.
List $56.95 *Order #1915* **$49.95**

### NR-770HA

Same as NR-770HNMO but with an PO mount.
List $56.95 *Order #2568* **$49.95**

### NR-72BNMO

A great compact dual-band mobile antenna. Gain: 2.15 dB.-2m, 2.15 dB.-70cm. Power rating: 100 watts. Length: 14" (356mm) Black. Mount: NMO.
List $41.95 *Order #1578* **$39.95**

### NR-73BNMO

A great, compact dual-band mobile antenna. Gain: 2.15 dB.-2m, 5.3 dB.-70cm. Power rating: 100 watts. Length: 34" (863mm) Black. Mount: NMO.
List $57.95 *Order #0299* **$51.95**

### SG-2000HD

High-performance 7/8 wave 2 meter mobile antenna. Gain: 5.2 dB. Power rating: 250 watts Length: 62.6" Weight: .88 lbs. Mount: PO (SO-239).
List $89.95 *Order #1594* **$79.95**

### SG-7500A

High-performance dual-band mobile antenna. Gain: 3.5 dB. (2m), 6.0 dB. (70cm). Power: 150 W. Length: 38" Wt: .8 lbs. Mount: PO (SO-239).
List $79.95 *Order #2366* **$74.95**

### SG-7900A

Maximum performance 2M/440 mobile antenna. Gain: 5.0 dB/7.6 dB. Power rating: 150 watts Length: 62" Weight: .8 lbs. Mount: PO (SO-239).
List $124.95 *Order #0142* **$109.95**

## HT Antennas

### RH77CA

This flexible BNC H.T. gain antenna provides ¼ wave on 2 meters and ½ wave on 70 cm. Also a favorite among scanner buffs and those using handheld wideband receivers. 16 inches.
List $24.95 *Order #2368* **$21.95**

The Diamond SRH77CA is similar, but terminates to an SMA. *Order #0491* **$24.95**

### SRH-519

The flexible Diamond SRH-519 2 meter/440 HT antenna is only 8.5" with 3 dBi gain, up to 10 watts. Very effective as a receive antenna for these bands: 150, 300, 450 and 800 MHz. SMA.
List $32.95 *Order #3502* **$29.95**

The Diamond RH-519 is the same, but features a BNC rather than an SMA connector.
List $27.95 *Order #3061* **$22.95**

## MX Series Duplexers

### MX-62M

LPF: 1.6-56 MHz, HPF: 76-450 MHz. Mix: SO239. Port: two 12" coax to PL259s.
List $74.95 *Order #2720* **$69.95**

### MX-72D

LPF: 1.6-30, 140-150 MHz, HPF: 400-460 MHz. Mix: SO239. Port: two PL259 plugs.
List $43.95 *Order #2573* **$39.95**

### MX-72H

LPF: 1.6-30, 140-150 MHz, HPF: 400-460 MHz. Mix: SO239. Port: two 12" coax to PL259s.
List $58.95 *Order #2571* **$49.95**

### MX-72N

LPF: 1.6-30, 140-150 MHz, HPF 400-460 MHz. Mix: SO239. Port: 12" coax to PL259, 12" coax to N.
List $49.95 *Order #2563* **$45.95**

### MX-610

LPF: 1.3-30 MHz, HPF: 49-470 MHz. Mix: SO239. Port: two 12" coax to PL259s.
List $69.95 *Order #1704* **$67.95**

### MX-2000 TRIPLEXER

LPF: 1.6-160, 110-170 MHz, HPF: 300-950 MHz. Mix: S0239. Port: two 12" coax to PL259s.
List $84.95 *Order #2681* **$79.95**

## Mobile Mounting Brackets

### K-400

Deluxe adjustable hatchback-trunklid mount ½" hole with NO connector or cable.
List $39.95 *Order #0978* **$36.95**

### K-400C

Deluxe adjustable hatchback-trunklid mount with 6 feet of low-loss cable and connector. SO239.
List $69.95 *Order #2072* **$64.95**

### K-400CNMO

Deluxe adjustable hatchback-trunklid mount with 6 feet of low-loss cable and connector. NMO
List $69.95 *Order #1250* **$64.95**

### K-400-3/8C

Deluxe adjustable hatchback-trunklid mount with 6 feet of low-loss cable and connector. 3/8x24
List $69.95 *Order #4504* **$64.95**

### K-540

Black swivel mirror mount ½" hole. No cable.
List $35.95 *Order #0573* **$34.95**

### K-540KM

Black swivel mirror mount with13 feet of RG58AU and PL259. SO-239 type mount.
List $59.95 *Order #1933* **$54.95**

COMET

## HF Base Antennas

### CHA250B

This broadband vertical antenna amazingly covers 75/80 meters through 6 meters with no gaps! Transmit range is 3.5-57 MHz and receive range is 2-90 MHz. SWR <1.5:1. This 23.5 foot vertical requires no radials and weighs only 7.1 lbs. The antenna consists of five sections of aluminum tubing that slide into each other. The bottom section has the matching network built-in. Only two simple measurements are required during the easy assembly. It can handle 250 watts SSB and 125 watts FM. SO-239 input. Mounts on a 1 to 2 inch mast (not supplied). Rated for 67 MPH wind survival.
List $469.00 *Order #2396* **$439.95**

## VHF/UHF Base Antennas

### GP-3

Single section, fiberglass vertical base antenna is for 2 meters/440 MHz. Gain: 4.5/7.2 dB Power: 200 watts, SO-239 Height: 5.9 feet.
List $104.95 *Order #3901* **$94.95**

### GP-6

Dual section, fiberglass vertical base antenna is for 2 meters/440 MHz. Gain: 6.5/9.0 dB Power: 200 watts, SO-239 Height: 10.3 feet.
List $169.95 *Order #3900* **$149.95**

### GP-9

Triple section, fiberglass vertical base antenna is for 2 meters/440 MHz. Gain: 8.5/11 dB Power: 200 watts, SO-239 Height: 17.8 feet.
List $219.95 *Order #3899* **$189.95**

### GP-15

Single section, fiberglass vertical base antenna is for 6 meters/2 meters/440 MHz. Gain: 3.5/6.2/8.6 dB Power: 150 watts, SO-239 7.9 feet.
List $179.95 *Order #3902* **$169.95**

## VHF/UHF Mobile Antennas

### UHV4

Mobile quad band 10, 6 and 2 meters plus 70 cm. 54 inches, fold-over with PL259 [M] connector. Mobile base & coax are not included.
List $119.95 *Order #3248* **$109.95**

### UHV6

Mobile multi-bander for 6M/2M/70cm plus coils for 40, 15 or 10 meters. ½ wave on 2M: 2.15dBi gain over a ¼ wave and it's 2 5/8 waves in phase on 70cm: 5.5dBi. Mobile base & coax are not included. Optional elements for 80 meters (L-3.5), 20 meters (L-14) or 17 meters (L-18) are available.
List $169.95 *Order #4289* **$149.95**

### B10/B10NMO

The **B10** 2 meter/440 MHz mobile antenna provides gain of 2.15 dBi/2.15dBi. VSWR <1.5:1. 50W. Has a black, cellular appearance. Connector type is UHF (for PO mount). 12 inches tall.
List $42.95 *Order #3918* **$37.95**

The **B10NMO** is same but for an NMO mount.
List $42.95 *Order #3919* **$38.95**

### SBB1/SBB1NMO

The **SBB1** 2 meter/440 MHz mobile antenna is a 1/4 wave on 2 meters with 1.5 dB gain and a 3 1/2 wave on 440 MHz providing 2.15 dB gain. VSWR <1.5 : 1 or less. 60W. Flexible 16.5 inches. PO.
List $42.95 *Order #3914* **$36.95**

The **SBB1NMO** is same but for an NMO mount.
List $42.95 *Order #3915* **$37.95**

### SBB2/SBB2NMO

The **SBB2** 2 meter/440 MHz mobile antenna is a 1/4 wave on 2 meters providing 2.15 dB gain and a 5/8 wave on 440 MHz with 3.8 dB gain. VSWR <1.5 : 1. 60W. Flexible 18 inches. For PO mount.
List $42.95 *Order #3912* **$36.95**

The **SBB2NMO** is same but for an NMO mount.
List $42.95 *Order #3913* **$37.95**

### SBB5/SBB5NMO

The **SBB5** 2 meter/440 MHz mobile antenna is 1/2 wave on 2 meters providing 3 dB gain and a 2 5/8 wave on 440 MHz providing 5.5 dB gain. VSWR <1.5 : 1. 120W. 38 inches with fold-over. For PO.
List $58.95 *Order #3910* **$48.95**

The **SBB5NMO** is same but with an NMO mount.
List $58.95 *Order #3911* **$49.95**

### SBB7/SBB7NMO

The **SBB7** 2 meter/440 MHz mobile antenna is 5/8 wave center load on 2 meters with 4.5 dB gain and a 3 x 5/8 wave on 440 MHz with 7.2 dB gain. VSWR <1.5:1. 70W. 55 inch with fold-over. PO.
List $79.95 *Order #3908* **$68.95**

The **SBB7NMO** is same but for an NMO mount.
List $79.95 *Order #3909* **$69.95**

### SBB224/SBB224NMO

This 2 meter, 220 and 440 MHz mobile antenna is a 1/4 wave on 2M, a 5/8 wave on 220 and 1/2 wave x 2 on 440 MHz. It provides gain of 2.15/3.6/6.0 dBi. VSWR <1.5:1. 100W. 36 in., Black. For PO.
List $78.95 *Order #3920* **$68.95**

The **SBB224NMO** is same but with an NMO mount.
List $68.95 *Order #3921* **$69.95**

### SBB25/SBB25NMO

The **SBB25** 2 meter mobile antenna is 5/8 wave with 4.1 dB gain. 100W. 56 inches. Black. For PO.
List $48.95 *Order #3904* **$40.95**

The **SBB25NMO** is same but for an NMO mount.
List $48.95 *Order #3905* **$41.95**

### SB14

This 6 meter, 2 meter and 440 MHz mobile antenna handles 120W. 43 inches. For PO mount.
List $67.95 *Order #3922* **$59.95**

### SB15

This 6 meter, 2 meter and 440 MHz mobile antenna handles 120W. 58 inches. For PO mount.
List $84.95 *Order #1167* **$74.95**

### CA-2x4SR

This 2 meter/440 MHz mobile antenna is a 1/2 wave on 2 meters providing 3.8 dB gain and a 1/2 wave on 440 MHz providing 7.2 dB gain. VSWR <1.5 : 1 or less. 150W. 40 inches. For PO mount.
List $64.95 *Order #3907* **$59.95**

### CSB7500/7700/7900

The Comet CSB 2 meter/440 MHz mobile antennas feature the finest heavy-duty components. They provide wide frequency range and have a fold-over hinge. Power capacity is 150 watts. They terminate to a PL-259 base and require a PO mount. Mount and coax sold separately.

CSB-7500 Gain: 3.6/6.1 dBi Length: 42 inches.
**CSB7500** *Order #4781* **$64.95**
CSB-7700 Gain: 4.4/6.9 dBi Length: 51 inches.
**CSB7700** *Order #4782* **$82.95**
CSB-7900 Gain: 5.1/7.7 dBi Length: 62 inches
**CSB7900** *Order #4783* **$102.95**

These antennas do *not* include coax or mount. For mount information please call or visit:
**www.universal-radio.com**

### M24M/M24S

The **M24M** economy 2 meter/440 MHz mobile antenna, *with* magnet mount, has coax to PL259.
**M24M** *Order #2818* **$37.95**
The **M24S** is same but with an SMA plug.
**M24S** *Order #1020* **$37.95**

## HT Antennas

### SMA3

2m/440/900 MHz SMA HT antenna is 9.75 inches with a fold-over hinge. Gain is a 1.2/1.7/3.4 dBi. 10 watts. Also very good for wideband receive.
List $39.95 *Order #2975* **$34.95**

### CH-32

The CH-32 M*iracle Baby* is an ultra small BNC HT antenna for 2 m/440. It is only 1.75" tall. It is a 0 dBi 1/4 wave and can handle up to 10 watts.
List $29.95 *Order #3938* **$26.95**

### SMA-501

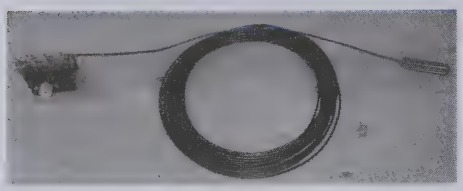
Similar to the CH-32, but terminates to SMA.
List $29.95 *Order #3934* **$25.95**

### CH-75

The Comet CH75 2M/440 HT BNC antenna is 15 inches tall and flexible. Gain is a 0/.32 dBi. 20 W.
List $25.95 *Order #3939* **$22.95**

PAR ELECTRONICS

## END-FEDZ



The **Par End-Fedz** are full length half wave dipoles with the coax connector at one end of the dipole, where it is most needed. These antennas can be mounted horizontally, vertically or as a sloper. End insulators are supplied. All hardware is stainless and the SO239 connector is silver-teflon. The radiator material is a tough, polyethylene jacketed, flexible 14 gauge copper wire. Power rating is 100 watts (except QRP *#1952*). The all black construction makes them difficult to see. Great for portable, field day or stealth applications.

| Band | Length | 1.5:1 BW | Order# | Price |
|---|---|---|---|---|
| EF-30 | 46.0 Feet | 200 kHz | *#2836* | $49.95 |
| EF-20 | 33.0 Feet | 300 kHz | *#4456* | $43.95 |
| EF-17 | 28.0 Feet | 350 kHz | *#4457* | $43.95 |
| EF-15 | 22.0 Feet | 400 kHz | *#4458* | $43.95 |
| EF-12 | 17.5 Feet | 500 kHz | *#4459* | $41.95 |
| EF-10 | 16.5 Feet | 600 kHz | *#4460* | $39.95 |
| EF- 6 | 9.2 Feet | 1200 kHz | *#4461* | $39.95 |
| EF-10/20/40 | 39" [25 watts] | | *#1952* | $59.95 |

# Miracle Antenna

## MIRACLE WHIP

The **Miracle Whip** lets you operate your new QRP HF/VHF/UHF portable transceiver with real freedom! It is a completely self-contained, all-band 50-inch telescoping whip antenna with integrated tuner for receiving and transmitting that mounts right on your radio. The Miracle Whip liberates your rig from coax, cables, mounts, tripods and trees, and gives you remarkable DX performance from desktop to picnic table, with no ground required. Take your go-anywhere rig anywhere you go. A perfect marriage with the Yaesu FT-817, its unique design enables you to transmit and receive all the way from 3.5 to 450 MHz. On HF, the integrated tuner will generally provide an excellent match (better than 2:1). On VHF, the antenna may be tuned by fine tuning the whip length in conjunction with the tuner. You can operate the Miracle Whip in different modes on VHF and UHF, such as 1/4 wave, 5/8, 3/4 or even 11/4 wavelengths, depending on frequency. This makes the Miracle Whip the only HF antenna that not only operates VHF and UHF, but does it with gain! Great for emergencies, testing, field days, camping, etc. It's a superb SWL and scanning antenna too. Please remember to limit your output power to 10 watts CW or 20 Watts PEP SSB. Only 13 inches when collapsed. Manufactured and warranted (3 years limited) by Miracle Antenna of Montreal, Canada.

*Order #3256* **$129.95**

## OMNIANGLE

The **Par Omniangle** antennas accomplish what the halo and turnstile started out to do- provide a clean omnidirectional, horizontally polarized antenna. These antennas lend themselves to: SSB/CW mobile, fixed station where a rotator is not convenient, net control, and even working the Russian satellites. Their small size and light weight also makes the Omniangles ideal for use where antenna restrictions are in effect. Visit our website for additional details and illustrations.

| Band | MHz | 1.5:1 BW | Order# | Price |
|---|---|---|---|---|
| OA-28 | 28-30 | 490 kHz | *#4465* | $73.95 |
| OA-50 | 49-54 | 490 kHz | *#4466* | $68.95 |
| OA-144 | 138-148 | 1500 kHz | *#4467* | $53.95 |
| OA-222 | 218-226 | 2500 kHz | *#4468* | $53.95 |
| OA-432 | 420-450 | 4500 kHz | *#4469* | $53.95 |

The **Par Stacking Harnesses** permit antenna stacking to incresase gain approximately 3 dB, the equivalent of doubling transmit power. Classic harnesses for combining two antennas consist of quarter wave coaxial line transformers made from 75 ohm cable and a combining tee. The RG-11/U used in these cables is Belden 8213. The PL259 connectors are Silver/gold/teflon.

| Model | Separation | Order# | Price |
|---|---|---|---|
| SK-50 | 144 inches | *#4470* | $39.95 |
| SK-144 | 48 inches | *#4471* | $37.95 |
| SK-222 | 36 inches | *#4472* | $37.95 |
| SK-432 | 18 inches | *#4473* | $55.95 |

# T.V. Evans G5RV ANTENNAS

The **T.V. Evans Company** of Simsbury, Connecticut, makes a quality line of preassembled G5RV antennas for amateur radio use. These antennas employ 14 gauge stranded copper wire, and solid dog-bone type insulators. All terminate in an SO-239 jack ready to accept your PL259 terminated antenna cable. (Coax and rope are not supplied).

| Model | Bands | Feet | Order# | Price |
|---|---|---|---|---|
| G5RV | 80-10M | 102 | *#4301* | $34.95 |
| G5RVrHD | 80-10M | 102 | *#4302* | 51.95 |
| G5RV Jr. | 40-10M | 51 | *#1727* | 28.95 |
| G5RV Mini | 20-10M | 26 | *#0185* | 25.95 |
| G5RV Senior | 160-10M | 204 | *#3627* | 79.95 |

cushcraft

## 5VB

**Cushcraft 5VB** vinyl connector boots come in a package of five along with silicone grease for each.

*Order #0503* **$14.95**

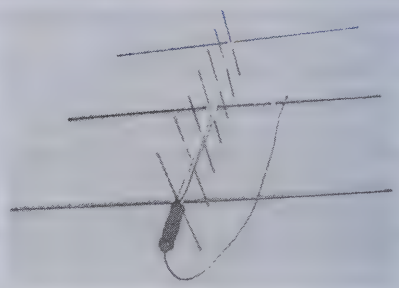
## SM-50

The **Par SM-50** stressed Moxon 6 meter antenna occupies approximately 1/2 the footprint of a traditional 2 element yagi, yet features nearly identical electrical specifications. Once the matchbox is installed onto the main radiator, mounting and tuning require no tools. Breakdown time is well under a minute making it ideal for mountain topping, roving and stealth operation. This horizontally polarized antenna provides 5.8 dBi gain, F/B: 17 dB, VSWR bandwidth of1.4 MHz between 1.5:1 points and uses a 50 ohms SO239. Power is up to 1000 watts. Size: 84 x 31" 3 Lbs.

**SM-50** *Order #1822* **$75.95**

Arrow Antenna

## 146/437-10WBP



Can you work an amateur satellite with an HT? Yes you can with the **Arrow 146/437-10WBP** satellite antenna! The boom is 3/4 inch aluminum with rounded corners. It is 37 1/2 inches long. On this "split" version the longest piece is 22 inches. Weight is only 20 ounces. Has black foam grip for easy holding. Under the foam grip, the boom is drilled and tapped for 1/4 x 20 for most camera tripods. It features preset dual gamma match. Your radio has only one BNC connector. The antenna has two. Therefore, this configuration includes the 10 watt duplexer and also has the coax cables to connect your radio to the antenna. This duplexer allows you to hear the down link while you are transmitting. Arrow also makes a very handy optional carry bag for this antenna.

**146/437-10WBP** *Order #3049* **$134.95**

The **Arrow Antenna Roll Up Bag** is just the ticket to transport your Arrow 146/437-10WBP satellite antenna in one neat package.

**Carry Bag** *Order #2971* **$36.95**

Use **Coax-Seal®** to protect any outdoor connection or connector. Coax-Seal is superior to electrical tape or vinyl sealant for moisture protection. One box, 60" x ½", will protect 9 connectors.

**Coax-Seal** *Order #1194* **$2.99**

## Barker & Williamson

### AP-10B

Designed for those who cannot erect a permanent antenna, the AP-10A attaches quickly to a window and with the aid of a counterpoise wire provides good performance on 2, 6, 10, 12, 15, 18, 20, 30 and 40 meters. 22-57 inches. SO239. Up to 200W.
List $89.00 *Order #3891* **$84.95**

### AC-1.8-30

This 110 foot End-Fed Vee covers 1.8 to 30 MHz continuous with a VSWR of less than 2:1. 1 KW.
List $249.00 *Order #4075* **$239.95**

### BWD-65

This 65 foot folded dipole covers 4 to 30 MHz continuous with a VSWR of less than 2:1. 1KW.
List $249.00 *Order #4076* **$239.95**

### BWD-90

This 90 foot folded dipole covers 1.8 to 30 MHz continuous with a VSWR of less than 2:1. 1 KW.
List $249.00 *Order #4077* **$239.95**

## ALPHA DELTA

### DX-A

This 40, 80 and 160 meter twin sloper is broadbanded and easy to tune. Length is 115 feet.
**DX-A** *Order #0378* **$69.95**

### DX-B

This sloper is designed for the ham and operates on 160 - 30 meters. Only 60 feet (18.3m) long.
**DX-B** *Order #1041* **$79.95**

### DX-CC

This "No Trap" dipole for 10, 15, 20, 40 and 80 meters is only 82 feet (25m) long.
**DX-CC** *Order #1031* **$129.95**

### DX-DD

For limited space installations this no trap shortened dipole for 40 and 80 meters does it in 82 ft.
**DX-DD** *Order #0675* **$99.95**

### DX-EE

This shortened "No Trap" dipole for 10, 15, 20 and 40 meters is only 40 feet (12.2m) long.
**DX-EE** *Order #1905* **$109.95**

## HY POWER QRP DIPOLES

**Hy Power QRP Dipoles** are rated at 150 watts (not 1500!). But 150 watts is more than enough capacity if you are running 100 watts or less, like most hams! The standard models are made with 16 gauge insulated wire and use Hy-Power quality parts including stainless steel hardware, SO-239 type center insulator and two end insulators. They are available in a full sized (no coils), shortened or multiband configurations. They are compact and lightweight for portable field operation or permanent base installation. Each antenna is completely assembled and ready to install. Just add your coax cable and rope.

| Model | Type | Feet | Order# | Price |
|---|---|---|---|---|
| FSDP40Q | 40M Fullsized | 70 | *#1655* | $28.95 |
| FSDP30Q | 30M Fullsized | 48 | *#1652* | 26.95 |
| FSDP20Q | 20M Fullsized | 35 | *#1640* | 24.95 |
| FSDP17Q | 17M Fullsized | 26 | *#1630* | 22.95 |
| FSDP15Q | 15M Fullsized | 23 | *#1613* | 21.95 |
| FSDP10Q | 10M Fullsized | 17 | *#1601* | 19.95 |
| FSDP 6Q | 6M Fullsized | 10 | *#1600* | 19.95 |
| LD4030Q | 40M Shortened | 30 | *#1595* | 39.95 |
| LD3017Q | 30M Shortened | 17 | *#1587* | 38.95 |
| LD2020Q | 20M Shortened | 20 | *#1572* | 35.95 |
| LD2012Q | 20M Very Short | 12 | *#4625* | 35.95 |
| LD1512Q | 15M Very Short | 12 | *#4626* | 35.95 |
| 2B2040LQ | 20/40M Multi | 44 | *#1570* | 58.95 |
| 2B1040LQ | 10/40M Multi | 31 | *#1568* | 47.95 |
| 2B1520LQ | 15/20M Multi | 29 | *#1535* | 44.95 |

## Valor

"The Clear Connection"

| Order # | Model | Item Description | List Price | Your Price |
|---|---|---|---|---|
| *2345* | **301P** | Medium Magnetic Mount 3/8"x24 | $24.50 | **$19.95** |
| *2346* | **401P** | Large Magnetic Mount 3/8"x24 | 31.70 | **19.95** |
| *2354* | **CX-144** | 5/8 Wave 2 Meter Base-loaded Mobile Antenna | 17.90 | **16.95** |
| *0434* | **GM270** | 2m/70cm On the Glass Mobile Antenna | 59.95 | **39.95** |
| *2397* | **PAM-B** | Medium Mag-Mount Motorola Style | 28.50 | **19.95** |
| *1490* | **PAS** | 3/4" Hole Mount Motorola Style | 19.90 | **12.95** |
| *2352* | **VAA-002** | 2 Meter Mag Mount Mobile Ant. 12 ft coax PL-259 | 23.90 | **18.95** |
| *2356* | **VAA-002BN** | 2 Meter Mag Mount Mobile Ant. 12 ft coax BNC | 22.90 | **17.95** |
| *0546* | **GM144** | 2 Meter *Through-the-Glass* Antenna | 44.95 | **29.95** |
| *0434* | **GM270** | 2 Meter/440 *Through-the-Glass* Antenna | 59.95 | **39.95** |
| *1190* | **PMM3B** | Mini 2M/440 Mag Mount Mobile Ant. 9 ft coax BNC | 19.95 | **14.95** |

## HY POWER DIPOLES

This series of full-sized, full power dipoles made by Hy Power feature 12 gauge UV insulated wire and use stainless steel electrical hardware, SO-239 type center insulator and two end insulators. They are available in a full sized (no coils), shortened or multiband configurations. Completely assembled - just add your coax cable and rope.

| Model | Type | Feet | Order# | Price |
|---|---|---|---|---|
| FSDP160 | 160M Fullsized | 268 | *#1285* | $58.95 |
| FSDP 80 | 80M Fullsized | 138 | *#1292* | 42.95 |
| FSDP 60 | 60M Fullsized | 90 | *#1293* | 33.95 |
| FSDP 40 | 40M Fullsized | 70 | *#1299* | 28.95 |
| FSDP 30 | 30M Fullsized | 48 | *#1372* | 26.95 |
| FSDP 20 | 20M Fullsized | 35 | *#1441* | 24.95 |
| FSDP 17 | 17M Fullsized | 26 | *#1439* | 22.95 |
| FSDP 15 | 15M Fullsized | 23 | *#1429* | 21.95 |
| FSDP 10 | 10M Fullsized | 17 | *#1383* | 19.95 |
| FSDP 6 | 6M Fullsized | 10 | *#1378* | 19.95 |
| LD4041 | 40M Loaded | 41 | *#1282* | 42.95 |
| 2B2040L | 20/40M Multi | 44 | *#1279* | 58.95 |
| 2B1730L | 17/30M Multi | 31 | *#1272* | 48.95 |
| TRI1020 | 10/15/20M " | 34 | *#1259* | 54.95 |
| TRIWARC | 12/17/30M " | 46 | *#1251* | 64.95 |

## Larsen Antennas

### NMO-150C

5/8 wave 2 meter mobile antenna. 144 to 148 MHz Gain: 3.0 dB. Mount: Motorola. Whip: W490.
List $33.50 *Order #0850* **$27.95**

### NMO-150B

Same as above but black coil and W490B whip.
List $37.80 *Order #1792* **$29.95**

### NMO-2/70C

2 Meter/440 mobile antenna. Gain: 2.4/4.0 dB. (70cm). Mount: Motorola style.
List $91.20 *Order #2852* **$59.95**

### NMO-QC

1/4 wave 2 meter mobile antenna. W200 whip.
List $22.00 *Order #1067* **$15.95**

### NMO-QB

Black 1/4 wave 2 meter mobile antenna. W200B.
List $23.50 *Order #0764* **$18.95**

## Mounts & Accessories

| Order # | Model | Item Description | List Price | Your Price |
|---|---|---|---|---|
| *2182* | **BNC-MM** | Mag-mount With BNC Connectors Both Ends | $56.00 | **$35.95** |
| *2747* | **NMO-CAP** | Rain Cap for NMO Type Mounts | 5.90 | **3.95** |
| *1274* | **NMO-K** | 3/4" Hole NMO Style Mount | 18.40 | **12.95** |
| *0467* | **NMO-MMR** | Round Mag-Mount for NMO Antennas | 38.50 | **31.95** |
| *1277* | **NMO-TLP** | Trunk Lip Mount for NMO Antennas | 35.20 | **24.95** |
| *0598* | **PO-K** | 3/4" Hole Mount for PO (SO-239) Ant.RG-58 | 39.15 | **25.95** |
| *2685* | **PO-MM-R** | Mag-Mount for PO (SO-239) Ant.RG-58 | 45.35 | **39.95** |
| *2686* | **PO-TLM** | Trunklip Mount for PO Style Antennas | 52.80 | **29.98** |
| *1077* | **TMB-34** | Stainless Steel "L" Mount With 3/4" Hole | 6.00 | **4.95** |

## APS 151

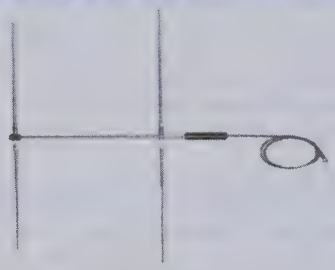
**Andrews Antenna Specialists APS151 2** meter On-Glass® antenna transmits and receives through glass, covering 144-174 MHz tunable. These efficient antennas mount high on the vehicle for maximum range. Gain: 3.0 dB. Length: 33"
List $75.00 *Order #3075* **$59.95**

Reinstallation kit for the "On-Glass"® antennas.
**KAV353** *Order #3992* **$11.95**

## DIAMOND D220

The **Diamond D220** mini discone antenna receives solid from 100 to 1600 MHz! It can also be used for transmit on 144, 430, 904, 1200 MHz (under 50 watts). Gain is 2.15dBi (144/904/1200MHz) and 5.5dBi (430MHz) VSWR <1.5:1. The discone design offers the best performance possible in an omni-directional antenna. This stainless steel antenna is 35.5 inches (with a 8.5 inch maximum diameter). The mast and mount are not supplied. Weight is 1.2 lbs. The D220 terminates to a 50 ohm male UHF [PL259] type connector. This will fit directly into PO type mounts, thus making it theoretically appropriate for some mobile application. The D220 and MAY1000 were reviewed in *CQ* Jan. 2006.
List $99.95 *Order #0312* **$89.95**

## DIAMOND MAY1000

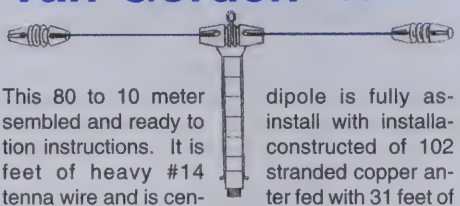


The **Diamond MAY1000** is a portable, two element, yagi beam antenna. It is a useful antenna for a variety of direction finding applications. Its frequency coverage is adjustable from 120-500 MHz. A frequency characteristic chart and tape measure are included. This antenna may also be used for transmit with up to 10 watts. The total length is 20.5 inches. The element length is adjustable from 11.4 to 51.5 inches. Space between elements is 4.75 to 13.75 inches. The bottom section of each element can be folded in for storage. The box that it comes in has a plastic carry handle. This antenna terminates to a 50 ohm, 39 inch coaxial cable with BNC male plug.
List $109.95 *Order #0288* **$99.95**

## DIAMOND RHF40

The **Diamond RHF40** is a strange HT antenna for 2 meters and 440 MHz. The top 13 inches of the antenna is completely flexible ... just like a pipe cleaner. It can be twisted into almost any shape. The total length of the antenna is 16 inches. It is a ¼ wave on 2 meters and a ½ wave on 70 cm. It can handle up to 10 watts. The RHF40 is also a capable wideband receive antenna for: 120/150/300/450/800/900 MHz. The base terminates to a 50 ohm BNC.
List $29.95 *Order #0795* **$27.95**
The **SRHF40** is the same but with an SMA plug.
List $29.95 *Order #4730* **$26.95**

## Van Gorden G5RV-E



This 80 to 10 meter dipole is fully assembled and ready to install with installation instructions. It is constructed of 102 feet of heavy #14 stranded copper antenna wire and is center fed with 31 feet of 450 ohm balanced feedline. It includes a center insulator with eye hook. The feedline is terminated with a SO-239 for easy coax hook-up.
List $35.95 *Order #0341* **$33.95**

### G5RV-JR

The **G5RV-JR** is similar to the G5RV-E above but covers only 40 to 10 meters, is only 52 feet long and has 17 feet (5.18m) of feedline.
List $30.95 *Order #2518* **$26.95**

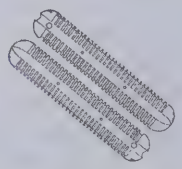
### G5RV-M

The **G5RV-M** is similar to the G5RV-E above but covers 160 to 10 meters, is 204 feet long and has 65 feet (20m) of feedline.
List $60.00 *Order #0835* **$54.95**

### G5RV-MB

The **G5RV-MB** covers 80 to 10 m (except 30m) and is 102 feet. Erect 1 wavelength above ground.
List $60.00 *Order #4442* **$54.95**

## Van Gorden HI-Q END INSULATORS



These big 6.375" end insulators are great for longer dipoles and other antenna projects. **(Pkg. of 2)**
*Order #2873* **$5.95**

### HI-Q BALUNS

Frequency: 3 to 40 MHz. Power up to 1500 watts.
**1:1 Balun** *Order #1019* **$17.95**
**4:1 Balun** *Order #0064* **$17.95**

### HI-Q CENTER INSULATORS

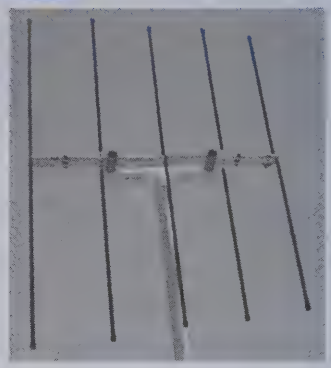
Compact center insulator for dipole antennas.
*Order #2362* **$8.95**

## SUPER M

The **NIL-JON Super M** may may be used for transceive applications at these frequencies: 140-200, 200-225 and 400-480 MHz, up to 200 watts. Please see page 51 of this catalog for more info.

The **Solarcon A99** ten meter base antenna is a best seller. Please see it on page 90.

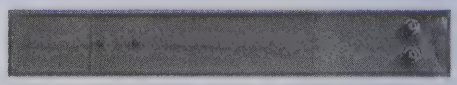
## 2M/440L5



The **Elk Antenna 2M/440L5** is a 2 meter and 440 log periodic. 2 Meter gain is 6.8 dbd (8.9 dBi) and 440 Gain is 7 dBd (9 dBi). It features 20 +dB Front to Back Ratio. This antenna has a 24 inch corrosion resistant aluminum alloy boom and anodized aluminum elements. Hardware is stainless steel. It can handle 200 watts maximum power on 2 meters and 100 watts on 440. 1:1 SWR 144-148 MHz, 440-450 MHz. Assembly and disassembly is fast (three minutes) thanks to color-coded elements that screw onto studs on the color-coded boom! Two bands are supported from one SO239 coax fitting. No duplexer required, no duplexer loss, no duplexer power limit, no duplexer cost! And you can use all portions of the band without retuning. Changing polarity is easy; just twist the mounting assembly to change from vertical to horizontal polarity. Only 1.3 lbs. Important Note: This antenna must be supported by a nonmetallic material. It is set up to receive a 1 inch PVC for the mast support (not supplied). Mast shown in photo is *not* supplied. (Optional MP80 case available).
**2M/440L5** *Order #4723* **$89.95**

The **MP80** heavy-duty black nylon carry bag is 27 by 8 inches. It has a main compartment, secured by a draw string, plug a velcro closable side pocket. Just right for transporting the 2M/440L5.
**MP80** *Order #4737* **$24.95**

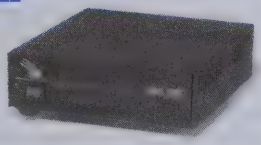
## Quick Silver FTP U/U



Radio enthusiasts have faced an age-old problem. How can I get my coax into the house without drilling holes through the wall? The **QuickSilver FTP U/U** *PaneRelief* coax feed through panel is the answer. It is designed to fit windows 19.5 to 32.5 inches wide. It is adjustable through a slot. After sizing, you can tape over the slot, or trim an odd piece of RG59/RG8X which fits the slot perfectly The FTP U/U is a clear plexiglas device, includes dual SO-239 barrel connectors. A clever solution when you can't drill holes in the house.
**FTP U/U** *Order #4053* **$29.95**

The **FTP 4/U** is the same but with four SO-239 barrel connectors to transfer up to four coax lines.
**FTP 4/U** *Order #3829* **$38.95**

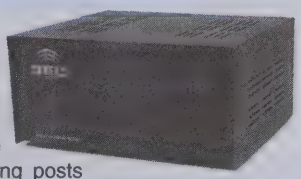
## SEC-1223



The **Samlex SEC-1223** switching power supply provides 13.8 VDC at 23 amps continuous or 24 amps surge. Input is 120 VAC 60Hz. Housed in a heavy metal case with non-skid rubber feet and has an illuminated on-off switch, removable AC cord and cooling fan. Output is to two screw type binding posts on the back panel. It features current limiting, short circuit and over voltage protection. Output ripple and noise is <15 Mv RMS. 7.2 x 8.7 x 2.2 inches 3.3 Lbs. UL listed.
List $139.95 *Order #2423* **$89.95**

The **SEC-1212** is similar, but 10 amps continuous and 12 amps peak. *Order #3747* **$79.95**

## SEC-20 SEC-25

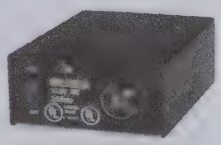


Samlex industry proven regulated linear power supplies feature circuit and over-voltage protection. Binding posts output terminals are on the back. The fuse is externally accessible. They have high surge capacity and feature heavy-duty cabinets. Input voltage is 110-120 VAC 60 Hz. Output voltage is 13.8 VDC ± 0.05 volts. 9.8 x 5 x 10.1 inches.

The **SEC-20** delivers 20A ICS, 15A continuous.
List $119.95 *Order #0928* **$89.95**

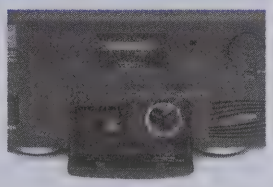
The **SEC-25** delivers 25A ICS, 20A continuous.
List $139.95 *Order #0924* **$119.95**

## SPS-1204UL



The **SPS-1204UL** provides 13.2VDC at 3.5 A and has a socket and terminals on the back. It features over-voltage protection and current limiting. 4 x 2 x 6.3 inches.
List $39.95 *Order #0923* **$28.95**

## DIAMOND GZV4000



The **Diamond GZV4000** regulated, variable switching power supply provides 5 to 15 VDC at 40 amps continuous. Input voltage is 100-140 VAC. < 8 mV ripple voltage. The back-lit meter can be switched to show amps or volts. A front panel access door hinges down to allow connection to the low amperage spring loaded clips or cigarette lighter jack. Has LEDs for power and overload conditions plus variable speed fan. With built-in 8 ohm speaker making it great for your service bench. 8.25x4.5x13 inches.
List $199.95 *Order #3195* **$179.95**

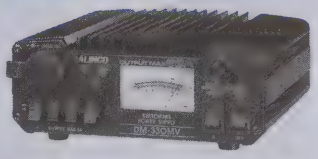
## MFJ-4245MV

The **MFJ-4245MV** regulated switching power supply provides 9 to 15 VDC at 45 amps surge or 40 amps continuous. Input is 110 VAC 47-62 Hz or 220 VAC 47-63 Hz switchable. The front panel has: five way binding posts, cigarette lighter socket and two quick disconnect connectors. Lit meters show voltage and amps. Includes over voltage and over current protection. Meets FCC Class B. 7.5 x 4.75 x 9 inches 6 Lbs. One year limited mfg. warranty. *Order #2105* **$189.95**

## PYRAMID PS-3

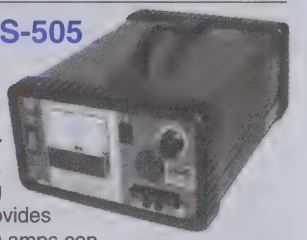
The **PS-3** 3 amp regulated 12 VDC power supply will run the low amperage devices from 120 VAC. With fuse, LED, surge and short protection. *Order #2184* **$22.95**

## ALINCO DM-330MVT



The **Alinco DM-330MVT** is a variable voltage, switching power supply that delivers 5 to 15 VDC at 30 amps continuous or 32 amps surge. With short circuit protection, a current-limiting system and extreme-temperature protection. The preset voltage function makes the DM-330MVT even easier to use. Just store the most frequently used voltage in the memory, and it is constantly ready to go. A cigar-plug socket (Max 10 amps), a set of Max 32 amps terminals, and two sets of snap-in terminals (Max 5 Amps) are provided. A backlit Amp/V meter. Input voltage is 120 VAC. Ripple is less than 15mVp-p at rated load
List $198.95 *Order #4082* **$169.95**

## SS-505

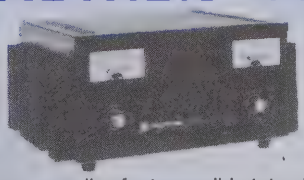


The **Daiwa SS-505** regulated, variable switching power supply provides 5 to 15 VDC at 50 amps continuous (55 amp surge). Input voltage is 90-123 VAC 50/60 Hz. Less than 1.5% voltage fluctuation and less than 5 mV ripple voltage. Output to binding posts on the rear panel. Low amperage spring loaded terminals and cigarette lighter jack are on the front. With carry handle and automatic fan. Only 9 x 5 x 12.5 inches 8.4 pounds.
List $489.00 *Order #0944* **$399.95**

## SS-30W

The **Daiwa SS-330W** regulated, variable switching power supply provides 5 to 15 VDC at 30 amps continuous. Input voltage is 110 VAC 50/60 Hz. Less than 1.5% voltage fluctuation and less than 10 mV ripple voltage. It features output to binding posts on the front panel, dual meters. Handle on the top and a fan on back. 5.2 x 4 x 10.5 inches
List $184.95 *Order #3344* **$169.95**

## ASTRON VS-50M



Astron power supplies feature solid-state electronic regulation, fold back current limiting for protection from excessive current and shorted output. Crowbar over voltage protection is also provided on all models except the RS-4A. These high-quality power supplies are manufactured in the U.S. and carry a one year limited warranty. Models ending in "M" feature a meter or meters. Models starting with "VS" are variable 2 to 15 volts. [1]Amp ratings for variable supplies are rated at 13.8 VDC. Models starting with RM are for 19" rack mounting. We also carry the new switching rack mount power supplies. See our website or call for information.

| Order # | Model | Continuous Duty Amps | ICS Amps | Size(in) HxWxD | Shipping Weight (Lbs.) | List Price | Your Price |
|---|---|---|---|---|---|---|---|
| *2461* | **RM-35M** | 25 | 35 | 5 x 11 x 11 | 27 | $249.95 | **$229.95** |
| *2505* | **RS- 4A** | 3 | 4 | 3¾ x 6½ x 9 | 7 | 59.95 | **49.95** |
| *2506* | **RS- 7A** | 5 | 7 | 3¾ x 6½ x 9 | 9 | 69.95 | **59.95** |
| *2507* | **RS-12A** | 9 | 12 | 4½ x 8 x 9 | 13 | 99.95 | **84.95** |
| *2508* | **RS-20A** | 16 | 20 | 5 x 9 x 10½ | 18 | 121.95 | **99.95** |
| *2510* | **RS-20M** | 16 | 20 | 5 x 9 x 10½ | 18 | 144.95 | **129.95** |
| *2509* | **RS-35A** | 25 | 35 | 5 x 11 x 11 | 27 | 197.95 | **159.95** |
| *2511* | **RS-35M** | 25 | 35 | 5 x 11 x 11 | 27 | 204.95 | **179.95** |
| *1815* | **RS-50A** | 37 | 50 | 6 x 13¾ x 11 | 46 | 285.95 | **239.95** |
| *1045* | **RS-50M** | 37 | 50 | 6 x 13¾ x 11 | 46 | 314.95 | **259.95** |
| *2528* | **RS-70M** | 57 | 70 | 6 x 13¾ x 12¼ | 53 | 372.95 | **299.95** |
| *2369* | **SL-11A** | 9 | 11 | 3 x 7¾ x 9¾ | 16 | 90.95 | **74.95** |
| *1043* | **SS-25** | 20 | 25 | 3 x 7 x 9½ | 5 | 161.95 | **119.95** |
| *0541* | **SS-25M** | 20 | 25 | 3 x 7 x 9½ | 5 | 170.95 | **159.95** |
| *1419* | **SS-30** | 25 | 30 | 3¾ x 7 x 9¾ | 6 | 186.95 | **129.95** |
| *0502* | **SS-30M** | 25 | 30 | 3¾ x 7 x 9¾ | 6 | 233.95 | **179.95** |
| *0039* | **VS-20ML** | 16[1] | 20[1] | 5 x 9 x 10½ | 20 | 170.95 | **139.95** |
| *0756* | **VS-35M** | 25[1] | 35[1] | 5 x 11 x 11 | 29 | 238.95 | **199.95** |
| *2994* | **VS-50M** | 37[1] | 50[1] | 6 x 13¾ x 11 | 46 | 330.95 | **279.95** |

## HM HANDIMIC

The **Heil HM Handi Mic** is a new hand mic series designed with a very special open sorbothane shock mount that puts the various Heil microphone elements in the open, not encased in a shell. This results in the cleanest, clearest and most articulate hand microphone ever! The low handling noise and exceptional cardioid pattern makes the Handi Mic ideal for mobile or portable use. These Handi Mics terminate in the traditional Heil 4 pin XLR broadcast connector allowing the Heil CC-1 connecting cables to be used. Or Heil has developed a new series of shielded coiled cables called the CH-1 series. The Heil CH-1 is a shielded coil cord with 14" of straight section and 15" of coil making it very easy to use unlike most of the coil cords. Each Handi Mic is shipped with the unique Heil dash or wall mount, a 5/8" -27 mic clip and a foam windscreen.

| | | |
|---|---|---|
| **HM-4** [HC4] | *Order #3318* | $74.95 |
| **HM-5** [HC5] | *Order #3294* | $74.95 |
| **HM-iC** [iC] | *Order #3293* | $74.95 |
| **HMM-PRO** | *Order #3291* | $75.95 |

## GM SERIES

The **Heil Goldline** studio series was created specifically for full-range smooth articulate SSB audio with a wide 60Hz-16kHz response. A +4dB peak @2 kHz gives the new Goldline microphone excellent voice articulation along with it's *big bottom* low end that is all important for producing a well balanced studio quality SSB signal. The GM-4 also features the HC4 DX Dream Machine element. The GM-5 has the HC5 as the second element. The GM-V vintage version is high impedance for older "boat anchor" transceivers. Shown above in optional SM-1 Shock Mount.

| | | |
|---|---|---|
| **GM-4** [HC4/PL] | *Order #0356* | $129.95 |
| **GM-5** [HC5/PL] | *Order #2570* | $129.95 |
| **GM-V** | *Order #0191* | $149.95 |

## iCM

The **Heil iCM** mic is expressly for ICOM ***pre*** PRO models and features the new Heil 'iC' element (35 to 10,000 Hz @-3dB) perfect for the early ICOM audio preamplifiers. The beautiful platinum finish body is perfect for hand held use or mounting on a desk stand or microphone boom. It is supplied with a universal mic clip that will interface with a variety of stands and booms. The iCM comes complete with an attached 5 foot Heilwire cable and terminates in the familiar 8 pin Foster connector wired to mate with all early 8 pin ICOM front ends. A ¼ inch female pig tail exits this 8 pin connector that allows the interface of a footswitch or hand switch (both optional) to control the PTT line. A soft touch PTT switches is mounted on the body of the iCM.

List $95.00 *Order #3224* **$88.95**

## HM-10 SERIES

Studio quality microphone has a gorgeous high gloss black lacquer finish. It utilizes the new Heil exclusive *Light Touch* recessed PTT switch. Available with HC4, HC5 or dual (both) elements. Requires CC1 type mic cable.

| | | |
|---|---|---|
| **HM10-4** [HC4] | *Order #1893* | $73.98 |
| **HM10-5** [HC5] | *Order #4235* | $73.98 |
| **HM10DUAL** [HC4/5] | *Order #2109* | $119.95 |

## CLASSIC SERIES

The **Heil Classic** mic is an exact copy of a 1930 broadcast microphone, the Classic design is focused on the use with amateur radio transceivers. It contains two dynamic mic elements. The new PROLINE wide frequency range broadcast element and your choice of the HC4 (HCL4) DX element or the HC5 (HCL5) full range communications element. The HCL-iC uses the high performance Heil iC electret element. Each version requires a CC1 mic cable.

| | | |
|---|---|---|
| **HCL-4** [HC4/PL] | *Order #2465* | $228.95 |
| **HCL-5** [HC5/PL] | *Order #3349* | $229.95 |
| **HCL-iC** [iC/PL] | *Order #2457* | $227.95 |

## PR 780

The **Heil PR780** is the absolute perfect match for the incomparable Icom 7800 as well as for the Icom 746/756 Pro series. The Heil PR 780 is a packaged in a large box with the dual element microphone, SM 3 mount, CB1 base, CC1 XLR i cable and HS-2 handswitch.

*Order #3867* **$299.95**

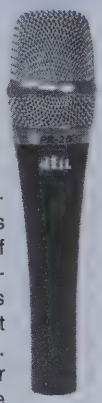
## CC1 MIC CABLES

| | | | |
|---|---|---|---|
| *#0124* | **CC1-C** | Collins Plug | $37.95 |
| *#1772* | **CC1-D** | Drake Plug | $32.95 |
| *#0108* | **CC1-I** | ICOM 8 Pin Plug | $29.95 |
| *#0351* | **CC1-IM** | ICOM Modular | $29.95 |
| *#3114* | **CC1-K** | Kenwood 8 Pin | $29.95 |
| *#0239* | **CC1-K-4** | Kenwood 4 pin Plug | $31.95 |
| *#1051* | **CC1-KM** | Kenwood Modular | $29.95 |
| *#4528* | **CC1-T** | Ten-Tec 4 Pin Plug | $31.95 |
| *#1517* | **CC1-Y** | Yaesu 8 Pin Plug | $29.95 |
| *#0820* | **CC1-Y-4** | Yaesu 4 Pin Plug | $31.95 |
| *#0336* | **CC1-YM** | Yaesu Modular | $29.95 |
| *#1622* | **CC1-XLRI** | ICOM 8 Pin Plug | $30.95 |
| *#1508* | **CC1-XLRK** | Kenwood 8 Pin Plug | $30.95 |
| *#1623* | **CC1-XLRY** | Yaesu 8 Pin Plug | $30.95 |

## CCH1 MIC CABLES

| | | | |
|---|---|---|---|
| *#3408* | **CH1-i** | ICOM 8 Pin Plug | $21.95 |
| *#3401* | **CH1-iM** | ICOM Modular | $21.95 |
| *#3361* | **CH1-K** | Kenwood 8 Pin Plug | $21.95 |
| *#3386* | **CH1-KM** | Kenwood Modular | $21.95 |
| *#4766* | **CH1-Y8** | Yaesu 8 Pin Plug | $21.95 |
| *#3346* | **CH1-YM** | Yaesu Modular | $21.95 |

## PR-20



The **Heil PR20** Proline broadcast mic is a professional quality dynamic cardioid microphone designed for commercial broadcast, recording and live sound reinforcement applications which require a smooth flat 40 - 18,000 Hz frequency response. This Heil 'PRO-LINE' element is usable in extreme high sound pressure levels and is immune to overload conditions as a condenser usually will be. The cardioid pattern offers the greatest rejection at 180 degrees off axis which is directly behind the microphone and creates virtually no off-axis coloration while providing the greatest possible rejection of unwanted audio. This mic was designed principally for studio and broadcast use. It may also be used for traditional amateur radio applications with the addition of the appropriate XLR cable and HS 2 handswitch or FS 2 footswitch.

List $160.00 *Order #3556* **$119.95**

## PR-30

The **Heil PR-30** Proline broadcast mic is a professional quality dynamic cardioid microphone designed for commercial broadcast, recording and live sound reinforcement applications and is a comparable sound to the finest condenser microphone because of it's wide frequency response, excellent transient response and low IMD. Shown with optional SM2.

List $289.00 *Order #2920* **$219.95**

## PR-40

The **Heil PR40** Proline Broadcast mic features the new technology of the Heil DM 6 dynamic element with response down to 28 Hz and stays perfectly flat up through 18kHz. with a beautiful mid range rise giving this microphone gorgeous vocal articulation. Shipped with the SM 3 5/8" -27 mount assembly and case.

*Order #3886* **$254.95**

## HHG

The **Heil HHG** Heritage broadcast mic has an impressive deep chrome finish. It houses the Heil ProLine commercial broadcast element. This 600 ohm balanced mic with XLR3 output, is designed primarily for commercial and vocal applications. Base and cable are not included. See CB1-PTT.

List $148.00 *Order #4602* **$129.95**

● See the **Heil Quiet Phones** on page 31.

## BM10 & BM5 SERIES

The **Heil BM10** boomsets are a favorite with contest and DXpedition operators. The BM10-4 features the HC4 DX Dream Machine element and has dual red ear pads. The BM10-5 utilizes the HC5 mic element and has dual blue ear pads. The BM10s and 5s require the appropriate AD1 adapter.

**BM10-4** [HC4] *Order #4324* $89.95
**BM10-5** [HC5] *Order #4325* $89.95

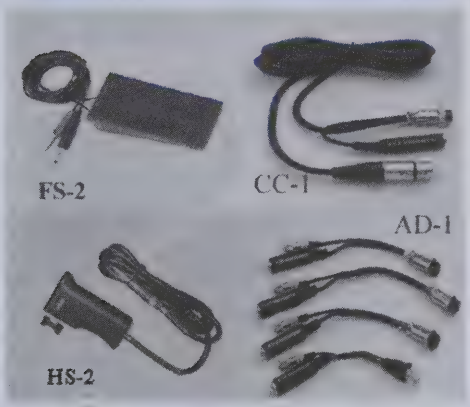
The **Heil BM-5** series features just one earphone.

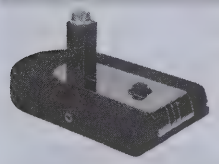
**BM5-4** [HC4] *Order #4322* $64.95
**BM5-5** [HC5] *Order #4323* $64.95

## AD1 BOOMSET CABLES

| | | | |
|---|---|---|---|
| *#4231* | **AD1-C** | Collins Plug | $24.95 |
| *#2204* | **AD1-D** | Drake Plug | $16.95 |
| *#3879* | **AD1-I** | ICOM 8 Pin Plug | $16.95 |
| *#3336* | **AD1-iCM** | ICOM Modular | $16.95 |
| *#1393* | **AD1-K** | Kenw/Alinco 8 Pin Plug | $16.95 |
| *#2718* | **AD1-K-4** | Kenwood 4 Pin Plug | $17.95 |
| *#2056* | **AD1-KM** | Kenw/Alinco Modular | $16.95 |
| *#0933* | **AD1-T** | Ten-Tec 4 Pin Plug | $17.95 |
| *#0712* | **AD1-Y** | Yaesu 8 Pin Plug | $16.95 |
| *#1717* | **AD1-Y-4** | Yaesu 4 Pin Plug | $17.95 |
| *#2055* | **AD1-YM** | Yaesu Modular | $16.95 |

## MOUNTS & ACCESSORIES

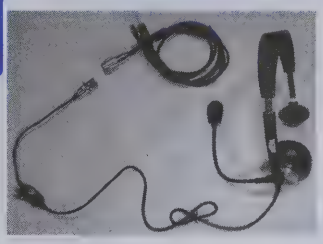


The **CB1-PTT** art deco base features a soft PTT switch that terminates on the left side to a 1/8" mini-jack *Order #1376*

| | | | |
|---|---|---|---|
| *#2245* | **AD100** | FT100 Adapter | $22.95 |
| *#2840* | **ADM817** | FT817 Adapter | $24.95 |
| *#0518* | **CB-1** | Classic Mic Stand | $49.95 |
| *#1376* | **CB-1PTT** | Classic Mic Stand PTT | $59.95 |
| *#4263* | **DT-1** | Flush desk flange mount | $29.95 |
| *#2025* | **FL-2** | Desk flange mount | $23.95 |
| *#0481* | **FS-2** | Dual Foot Switch | $36.95 |
| *#2775* | **HC-4** | DX Dream Mic Element | $41.95 |
| *#2585* | **HC-5** | Articulate Mic Element | $41.95 |
| *#3380* | **HDAT** | FT100 Headphone Att. | $5.95 |
| *#2645* | **HEILWIRE** | Mic wire 20 feet | $19.95 |
| *#3887* | **HS-2** | Hand Switch | $27.95 |
| *#2099* | **PL-2T** | Mic Boom with cable slot | $84.95 |
| *#4242* | **RS-1** | Riser | $23.95 |
| *#4629* | **SB-2** | Small Mic Boom | $41.95 |
| *#0409* | **SM-1** | Shock Mount | $44.95 |
| *#3840* | **SM-2** | Shock Mount | $88.95 |
| *#0000* | **TB-1** | Mic Stand | Disc. |
| *#4601* | **TM-1** | Triple mic mount | $13.95 |
| *#4630* | **WM-1** | Wall Mount | $18.95 |
| *#2407* | **XT-1** | Imped. Match Xformer | $14.95 |

## TRAVELER 706



The original **Heil Traveler** 706 boomset has an Up/Down and PTT control unit with belt clip installed on a 3 foot long cable. The boom mic is on a hinge and can be swung up. The HSTA706 cable *is* included. Close out.

*#4234* **Traveler 706** IC-706 $59.98

## TRAVELER HTSS

The *improved* **Heil Traveler HTSS** is similar to the original Traveler but has a larger speaker for even better sound and a padded head-band for more comfort. Each improved Traveler contains a special RFI package installed inside the "iC" microphone element and eliminates any RFI problems when using the Traveler for back packing where antenna grounds are at a minimum. The boom mic is on a hinge and can be swung up.

◆ Cable is ***not*** included, so you must also order the appropriate HSTA or HTA cable for your radio.

*#0819* **HTSS** Single Traveler NO CABLE $65.95

## TRAVELER HTDS

The **Heil Traveler HTDS** is similar to the regular single sided Traveler, but has ***dual*** ear pieces. Each dual Traveler HTDS contains a special RFI package installed inside the "iC" microphone element and eliminates any RFI problems when using the Traveler for back packing where antenna grounds are at a minimum. The boom mic is on a hinge and can be swung up. Reminder: It is illegal and unsafe to operate a vehicle with both ears covered.

➤ Cable is ***not*** included, so you must also order the appropriate HSTA or HTA cable for your radio.

*#0808* **HTDS** Dual Traveler NO CABLE $87.95

## TRAVELER CABLES

| | | | |
|---|---|---|---|
| *#2608* | **HSTA706** | Cable Icom 706/703 | $21.95 |
| *#0752* | **HSTAiC8** | Cable Icom 8p | $21.95 |
| *#1448* | **HSTAK8** | Cable Kenwood 8p | $21.95 |
| *#1859* | **HSTAKM** | Cable Kenwood Mod | $21.95 |
| *#0291* | **HSTAYM** | Cable Ysu 817/857/897 | $21.95 |
| *#3837* | **HTAiHT** | Cable Icom HT | $21.95 |
| *#3838* | **HTAKHT** | Cable Kenwood HT | $21.95 |
| *#3836* | **HTAVX** | Cable Ysu VX (except 7) | $21.95 |

## PROSET 4 / 5 / +! /+ic!

The Heil **Proset-4** is a favorite with DXers and contesters. The comfortable headband is fully adjustable and the mic boom is flexible. The Proset-4 features the HC-4 DX element. Requires AD-1 type adapter.

List $135.00 *Order #2406* $124.95

**Proset-5** is the same, but with the HC-5 element providing articulate speech audio for rag chewing.

List $135.00 *Order #3441* $124.95

**Proset-Plus!** has *both* the HC-4 & HC-5 elements.

List $210.00 *Order #3862* $189.95

**Proset-Plus ic!** has both the HC-4 and HC-5 elements and is exclusively designed for Icom transceivers and includes the AD1-ic cable adapter.

List $227.00 *Order #4581* $199.95

## PROSET PSQP 4 / 5 / iC

The **Heil Pro Set** line is now also available with the new Quiet Phone technology. You still get the lightweight comfortable headset, a fully flexible boom and full size ear heavily stuffed, removable pads. The microphone works in VOX or P.T.T. modes. The Quiet Phone technology uses two small mics placed deep inside the headphones that listen to the outside as well as the program 'noise'. Wired out of phase and feeding the in-line differential amplifier powered by a single AAA cell [not supplied] - everything below 400 Hz is gone. Blower noise, ambient noise, TV in the next room or - most importantly the second and third operator in the multi station. The flexible boom comes equipped with your choice of Heil *Key Element* microphone cartridge. The Pro Set 4 and 5 require the appropriate AD-1 adapter. (Please note that PSQP4 and PSQP5 will *not* drive the Icom Pro series, and the PSQPic is suggested).

The **Heil PSQP4** Pro Set Quiet Phone 4 features the HC-4, DX Dream Machine element.

List $225.00 *Order #1163* $209.95

The **Heil PSQP5** Pro Set Quiet Phone 5 utilizes the HC-5 mic element.

List $225.00 *Order #0478* $214.95

The **Heil PSQPic** Pro Set Quiet Phone ic utilizes the high performance Heil ic electret element and is only for ICOM radios. The Pro Set ic includes a special AD-1 ic adapter. (If you have an IC-706, then purchase *#3336* AD-1-iCM.)

List $242.00 *Order #1485* $229.95

## BAG1 & BAG2

Leatherette travel **BAG 1** protects your boomset.

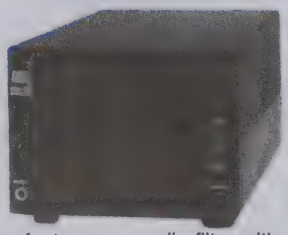
Bag1 *Order #3889* $23.95

**BAG 2** protects BM-10, Traveler or Quietphones

Bag2 *Order #3888* $18.95

## JRC Japan Radio Co., Ltd.

### NVA-319



The **Japan Radio Company NVA-319** external speaker is an elegant match to the NRD-535 or NRD-545 receiver. This speaker features an audio filter with buttons for: High Cut A, High Cut B and Low Cut. These functions can be used in many combinations to tailor the receiver's audio. A 38 inch (.9 m) shielded audio cable that terminates to an RCA phono plug is attached to the speaker. This will plug directly into the Speaker Output of your NRD-535 or NRD-545. Additionally there is an Input 2 Jack on the rear panel (RCA phono jack) for a second audio source. A button on the front allows you to select Input 1 or 2. This speaker has a post-filtration 1/4 inch headphone jack on the front panel of the speaker. 8 ohms and the maximum power input is 3 watts. 7.1 x 5.2 x 11.1 inches

**NVA-319** *Order #0852* **$199.95**

## KENWOOD

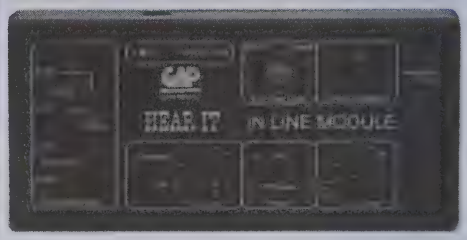
### SP-31

The **Kenwood SP-31** is a high quality speaker with audio filtration that may be used with virtually any communications receiver or transceiver. The SP-31 features a 4 inch (10 cm) speaker in a metal enclosure. The switch in the upper right corner can select from two audio input sources. The three switches on the lower right activate two high (HIGH 1, HIGH 2) cut and one low (LOW) cut audio filters. This allows you to tailor the frequency response of the speaker system. This speaker also has a standard 1/4 inch headphone jack on the front panel and a Line Output Jack on the back panel (to feed a recorder, RTTY unit, etc.). These convenient output jacks are post filtration. The input posts are spring terminals. An audio cable is provided. The front may elevated by adjusting the front feet. 7.2 x 4.7 x 12.3" (180x120x310 mm).

**SP-31** *Order #0694* **$99.95**

## GAP ANTENNA PRODUCTS

### HEAR IT MODULE

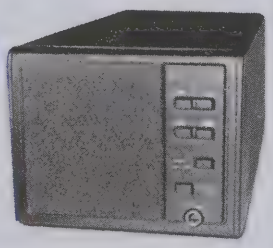



The **Gap *Hear It* Module** is an inline filter with up to -20db of noise attenuation selectable at 8 levels. It features a Sensitivity Control knob. Audio input and output is via 3.5 mm mono mini jacks or RCA phone. There is also a headphone socket. This device requires 12 to 24 VDC at 500 ma. It is supplied with a 3.5mm-3.5mm Audio cable and fused power leads. (This device does not have a built-in speaker). Made in England. 6.75 x 3.325 x 1.375 inches, 1 Lb.

**HEAR-IT** *Order #4048* **$194.95**

## ICOM

### SP-23

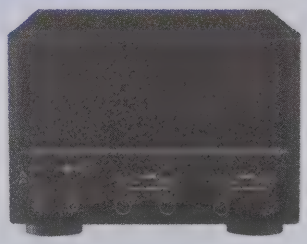


The **Icom SP-23** speaker matches many Icom receivers and transceivers. It is 8 ohms and is rated at 2 watts [4 watts maximum]. The SP-23 with four separate audio network filters [HPF1 500 Hz, HPF2 250 Hz, LPF1 3000 Hz, LPF2 1000 Hz]. This allows you to tailor the frequency response of the speaker. Input A or B may be selected so two radios may share this speaker. There are two 3.5mm mono audio input jacks on the back panel. There is a speaker on-off switch and a 1/4 headphone jack on the front panel. The bottom panel of the speaker features a pull-out tilt stand if you wish to angle the speaker. A single audio cable is supplied with a mono mini plug at both ends. Metal construction 5.75 x 4.25 x 11.2 inches 3.6 lbs.

**SP-23** *Order #1696* **$169.95**

## YAESU

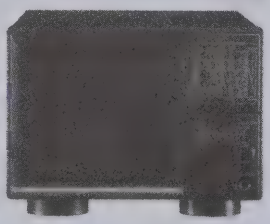
### SP-9000



The **Yaesu SP-9000** is designed to match the FT-9000 series. The SP-9000 features two 4 inch speakers, affording independent audio paths for the Main and Sub VFO output and a front panel switch that allows you to combine the audio signals from both receivers for mixed distribution from the two combined speakers. The audio filters provide three steps of high-cut and two steps of low-cut filtering, and each audio path (Main/Sub) may be filtered independently. You also get two mute switches and two headphone jacks for monitoring VFOs A and B. 9.7 x 6.5 x 17.2" 8.8 Lbs.

**SP-9000** *Order #1301* **$339.95**

### SP-2000

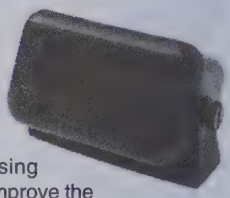


Information on the new **Yaesu SP-2000** was not available at press time. Please call or view our website.

**SP-2000** *Order #2604* **T.B.A.**

## GAP ANTENNA PRODUCTS

### HEAR IT



The **Gap *Hear It*** is a compact speaker with digital signal processing that reduces noise to improve the signal to noise ratio and speech clarity for AM, FM or SSB. This innovative product was developed by **bhi** of England and is now available in the USA. A front mounted bi-color LED lets you know when the speaker is drawing power (red) and when it is processing (green). The rear panel features a DIP switch used to set the 8 levels of noise cancelling. It also has the DC input jack for the required 12-28 VDC. With audio cable to mini plug. 4.5x3.8x2.3".

**HEAR IT** *Order #0749* **$158.95**

## SGC

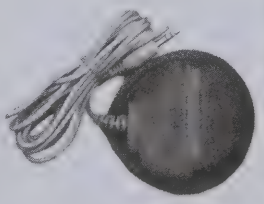
### ADSP²

The **SGC ADSP²** speaker has SGC's state-of-the-art ADSP2 filtering technology. With only a touch you can select: no noise reduction, the original ADSP, and the new ADSP² noise reduction modes which provides up to 26 dB of noise reduction within the passband. The quality, black metal enclosure features a wired cable for audio input (mono mini plug) and for 12 VDC input. The stand is adjustable. Requires 13.8 VDC at 500 ma. 5 x 3 x 2.5".

**ADSP²** *Order #0753* **$129.95**

## PS-200

The **CCrane PS200** SoftSpeaker makes private listening in bed comfortable. Just plug the SoftSpeaker into your radio and slip it under the pillow. Or the padding is so soft you can even set it directly under the ear. The foam padded cover is removable for cleaning. It features a 6 foot cord terminating in a 3.5 mm mini stereo plug.



**PS-200** *Order #4530* **$19.95**

## SANGEAN

### PS-100

The **Sangean PS-100** Pillow Mate speaker sits comfortably under your pillow. You can listen to your radio without disturbing your partner. White with cord that terminates to a stereo mini-plug. 3.5 x 4 x 1".

**PS-100** *Order #0885* **$12.95**

## Valor "The Clear Connection"

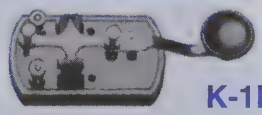
### VS-4

The **Valor VS4** is a basic mobile speaker on an adjustable stand with 9 foot cable to mini plug. 4-8 Ohms. 5W. 3x3x2½".

**VS4** *Order #3041* **$7.95**

## OCM-2W

The **Ameco OCM2W** is a combination code practice oscillator and CW monitor. It has a built-in speaker plus terminal connectors for headphones. A 9 volt battery and code key are required.
*Order #0545* **$29.95**



## K-1R

## K-4R

The **Ameco K-1R** is an economical practice code key with a black plastic base.
**K-1R** *Order #3021* **$10.95**

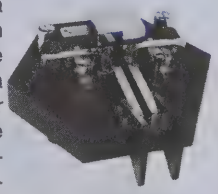
The **Ameco K-4R** key has an oval brass-plated base, ball-bearing movement and shorting bar.
**K-4R** *Order #3022* **$17.95**

## BY-2

Bencher paddles include gold-plated solid silver contact points.

| Order# | Model | Item Description | List Price | Your Price |
|---|---|---|---|---|
| *0458* | **BY-1** | Iambic Black | $120.00 | **$99.95** |
| *0459* | **BY-2** | Iambic Chrome Plated | 140.00 | **119.95** |
| *0460* | **BY-3** | Iambic Gold Plated | 360.00 | **299.95** |
| *3258* | **BY-4** | Iambic Black & Gold | 210.00 | **169.95** |
| *3218* | **RJ-1** | Hand Key Black | 105.00 | **89.95** |
| *3219* | **RJ-2** | Hand Key Chrome Plate | 130.00 | **109.95** |
| *0006* | **ST-1** | Straight Black | 120.00 | **99.95** |
| *0559* | **ST-2** | Straight Chrome Plated | 140.00 | **119.95** |

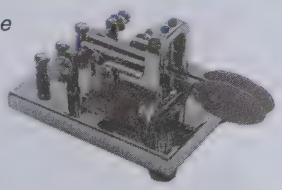
## HEX KEY



The **Bencher Hex Key** has a unique design that is attractive to the eye and a perfect match for the fingers of the proficient CW operator. Fully iambic, this innovative design utilizes magnets for tensioning, and unlike some rather expensive European designs, allows separate individual tensioning adjustment for dot and dash contacts. Weighs over 3 pounds!
List $195.00 *Order #4477* **$182.95**

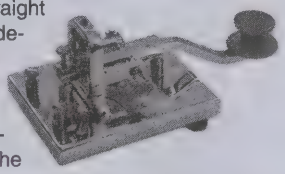
## VIBROPLEX®

*"Vibroplex, since 1890"*, is the oldest name in amateur radio. All the Vibroplex Iambics feature jeweled movements.



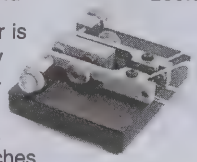
| Order# | Model | Price |
|---|---|---|
| *4272* | **Iambic Standard** | $159.95 |
| *4277* | **Iambic Deluxe** (shown) | 199.95 |
| *3360* | **Iambic Presentation** | 289.95 |
| *3325* | **Iambic Gold** | 299.95 |

The Vibroplex Straight key is distinctly designed on a heavy solid base. The stainless steel spring allows complete control of the tension. The famous Vibroplex logo plate with a unique serial number pinned to the top of the base with stainless steel pins.



| | | |
|---|---|---|
| *4417* | **Straight Key Standard** | $159.95 |
| *4366* | **Straight Key Deluxe** (shown) | 199.95 |
| *1399* | **Straight Key Gold** | 299.95 |

The Code Warrior Junior is an elegant iambic key that utilizes magnetic action (no springs!). It is beautifully made and a very compact 2.5 x 3 inches.



| | | |
|---|---|---|
| *0561* | **Code Warrior Junior** | $109.95 |
| *3265* | **Chrome Code Warrior Junior** | 149.95 |

Visit our website for more Vibroplex products.

## 422D

This deluxe keyer fits directly over the supplied Bencher BY-1 paddle for a compact configuration. It has adjustable weight, tone, speed and volume. Requires 9V battery or MFJ-1312D *#2433* $15.95.
List $179.95 *Order #0804* **$169.95**

## 422DX

Keyer **only** for installing on your BY-1 paddle.
List $89.95 *Order #1119* **$84.95**

## 401D & 407D

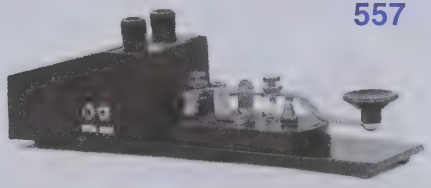
The **MFJ-401D** Econo Keyer II is for iambic, automatic, semi-automatic or manual keying with your favorite paddles. Requires 9V battery.
List $59.95 *Order #0325* **$52.95**

The **MFJ-407D** has the same features as above with front-panel mounted controls for speed, weight, tone and volume. Requires 9V battery.
List $69.95 *Order #1324* **$64.95**

## 550

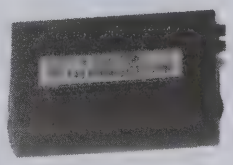
Economy straight key includes an adjustment for tension and for gap size. Black plastic base.
*Order #4656* **$14.95**

## 557



Deluxe code practice oscillator with straight key mounted on a heavy steel base. Has volume and tone control. Needs 9V battery or MFJ-1312D.
List $39.95 *Order #0555* **$37.95**

## 418



Learn Morse code anywhere, any time with the MFJ Pocket Morse Code Tutor. The LCD lets you see the code as it is generated. The **MFJ-418** is adjustable from 3 to 55 WPM with normal or Farnsworth spacing. Only 3.75x2.25x1". Requires a 9 volt battery.
**MFJ-418** *Order #3537* **$79.95**

## 414

The **MFJ-414** Morse code trainer is designed for ham clubs, schools and VE examiners. Includes: LCD readout, printer port, tape out and big audio. 110 VAC/12VDC operation. 8.5Wx2.25Hx6D
**MFJ-414** *Order #3087* **$189.95**

## 495

The **MFJ-495** Millennium memory keyer has a menu driven LCD displayplus 32 message memories of 256 characters each. With PTT output, built-in speaker, sinewave sidetone and more! 6.25 x 2.5 x 6.25 inches. Requires 12 VDC or optional MFJ-1312D.
**MFJ-495** *Order #2881* **$154.95**

## 461

The **MFJ-461** Morse Code Reader lets you watch Morse code signals turn into text messages. The words simply scroll across the LCD display. No cables to hook-up, no computer, no interface, no other equipment needed! Two-line, 32 character LCD display. Requires a 9 volt battery, not supplied.
**MFJ-461** *Order #2070* **$84.95**

Cobra®

## 19DXIV

The **Cobra 19DXIV** contemporary styled 40 channel compact CB has an LCD, S- meter, PA and instant channels 9 and 19. 4.6x1.8x6.8"

*Order #3718* **$49.95**

## 18WXSTII

The **Cobra 18WXSTII** features: LED S/RF meter. and LEDs for RX, TX and WX. Yes, you can receive ten NOAA weather channels. Also includes Cobra's SoundTracker™ technology significantly reduces the amount of static on all incoming CB signals. It is further optimized when two SoundTracker® CB's are communicating. Front firing speaker and instant channel 9/19.

*Order #1297* **$89.95**

SOLARCON ANTENNA RESEARCH

## A99

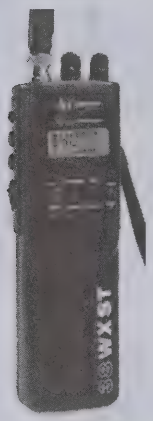
The **Solarcon A99** is a half wave over a quarter wave variable mutual inductance antenna for 10 to 17 meters. It features the Solarcon twin ring *Adjust-A-Match* system to obtain the optimum SWR. The rugged three-piece white fiberglass construction features triple plated brass fittings. 17.75 feet high. 3 dBi gain, power limit is 2000W Accepts PL-259 and mounts on a 1.5" mast (not supplied).

**A99** *Order #1001* **$69.95**

Optional ground radial kit available.

**GPK1** *Order #2490* **$44.95**

## HH38WXST



The **Cobra HH38 WX ST** is a powerful 4 watt, 40 channel handheld walkie talkie with 10 NOAA weather channels. This model features: SoundTracker® technology, instant channel 9 and a backlit display. A cigarette lighter cord and flex antenna are included. Requires 9 AA cells, not supplied.

*Order #4295* **$89.95**

## 25WXNWST

The **Cobra 25WXNWST** NightWatch 40 channel CB has a classic white-silver appearance during the day and a fully backlit appearance at night. It has Cobra's SoundTracker® system, dimmer, 7 NOAA weather channels, NB, ANL, RF gain and illuminated analog S/RF meter. 7.25 x 2.25 x 8.7".

*Order #4001* **$129.95**

Valor "The Clear Connection"

## CB27WX

The **Valor CB27WX** is an attractive and discreet glass mount mobile CB antenna. It features a 21 inch black collinear whip that looks like a cellular antenna. It is also designed to receive the NOAA weather band, if your CB tunes it. The CB27 comes complete with 15 foot of RG-58 coax cable terminating in a PL-259. With Tuning Tool.

**CB27WX** *Order #3522* **$29.95**

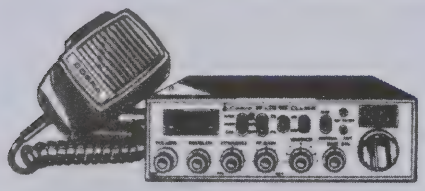
PYRAMID

## PS-3

The **PS-3** 3 amp regulated 12 VDC power supply will run the low amperage devices from 120 VAC. With fuse, LED, surge and short protection.

*Order #2184* **$22.95**

## 29LTDWXST



The **Cobra 29LTDWXST** Classic has 7 NOAA channels, NB, ANL, illuminated S/RF/SWR/MOD meter. Also includes SoundTracker®, RF gain and LEDs for RX, TX, WX and antenna warning.

*Order #1996* **$139.95**

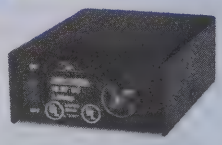
## 25WXST

The **Cobra 25 WXST** Classic has digital channel display, SoundTracker®, analog meter, Dimmer, CB/PA plus Dynamike and RF Gain plus switches for Ch. 9 and weather. 6.5 x 2.2 x 8.5 inches.

*Order #1997* **$119.95**

SAMLEX AMERICA

## SPS-1204UL



The **SPS-1204UL** provides 13.2VDC at 3.5 A and has terminals on the back and cigar plug socket on the front. It features over-voltage protection and current limiting. 4 x 2 x 6.3 inches.

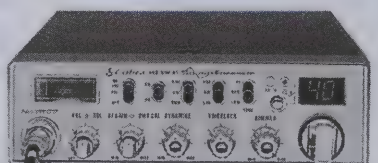
List $39.95 *Order #0923* **$28.95**

## 148GTL

The **Cobra 148GTL** is a serious 40 channel **SSB**-Single Sideband CB radio with dynamike boost and 12 watts of SSB RF power to give you the maximum legal range. You get: RF Gain, ANL, Switchable NB and 3 position Tone. Other refinements include: Illuminated S/RF/SWR meter, Dimmer, two color RX/TX LED and front panel mic connection.

*Order #4634* **$154.95**

## 29WXNWST



The **Cobra 29WXNWST** features SoundTracker® noise reduction, CB/PA, Dimmer, RF gain, analog S/RF/SWR meter, NightWatch illumination, weather, Dynamike, ANL/NB. 7.5 x 2.5 x 8.8".

*Order #2059* **$149.95**

uniden

## PC68LTW

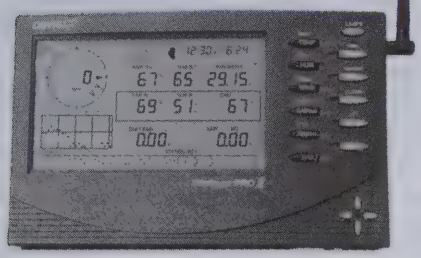
The **Uniden PC68LTW** features ANL, NB, illuminated analog S/RF meter, backlit knobs, TX/RX LEDs and RF gain. With 7 weather channels and instant channel 9. 8.9 x 2.25 x 7.5 inches.

*Order #4203* **$99.95**

Wilson Antenna

Our most popular mobile CB antenna is the **Wilson Little Wil**. The 37 inch Little Wil includes magnetic mount plus coax and can handle up to 300 watts *#3933* **$24.95**. Visit our website to view the entire range of Wilson models.

## VANTAGE PRO2 WIRELESS



Have you been waiting for the ultimate weather station? The Davis **Vantage Pro2** wireless is it. The Vantage Pro2 employs the latest technology to bring you sophisticated forecasting, on-screen graphing and the easy wireless installation. The huge backlit LCD display (6.5 x 3.5 inches, 150 x 90mm) instantly conveys an immense amount of information. The fixed display area shows you the most important weather variables at all times including temperature, humidity and barometric pressure. The compass rose shows wind direction to 1° or wind speed. You can view rainfall for minutes, hours, days, month year or storm plus rainfall for last 24 storms. Time and date are shown or you can show time of sunrise and sunset. The variable display area lets you pick between inside or optional temperature or soil moisture (optional sensors required). Or windchill, dew point or two different heat indices. Eight phases of the moon are also displayed on a special icon. Quick view icons show the forecast at a glance --- sunny, partly sunny, cloudy, rain or snow --- while a moving ticker-tape display gives more details. Sophisticated forecasting algorithms, not just barometric pressure make this possible. The Vantage Pro2 utilizes a more frequent update interval --- every 2.5 seconds, compared to the 3 to 15 minutes found on other stations! The graph section can show last 24 days or months of readings of highs and lows. View over 80 graphs including additional analysis of temperature, rain, rain rate, wind and barometric pressure. The outdoor sensor suite includes an anemometer, temperature and humidity sensors and rain collector with self emptying tipping bucket. The wireless integrated sensor suite runs on solar power and functions with as little as one hour of sunlight a day. The wireless suite can transmit up to 1000 feet (300 m) line of sight (typical range under most conditions is 150 to 500 feet. The Vantage Pro2 Console may be powered using the included AC-power adapter or with three C batteries (not included). One year limited warranty. Not available for export. [Davis 6152]

List $595.00 *Order #3896* **$535.95**

## WEATHERLINK

For the ultimate in weather monitoring use the Davis Weatherlink Software to connect the Vantage Pro2 to your PC. It fits neatly in the Vantage Pro console. Visit our website for full details, screen shots and PC requirements.

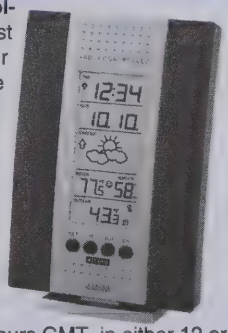
Serial Version *Order #4358* **$149.95**
USB Version *Order #1924* **$149.95**

## PERCEPTION II

The **Davis Perception II** monitors ***indoor*** climate using the most advanced technology available today. Temperature, barometric pressure and humidity are shown simultaneously on one easy-to-read display. Monitor your wine cellar, greenhouse or any other climate dependent area. There is a built in 12/24 hour clock with timer. You can turn the LCD illumination on or off. A solid state transducer is employed to measure atmospheric pressure at your location and can be indicated in inches of mercury, millimeters of mercury or millibars. There is also an arrow indication which appears on the bottom right hand corner of the display that indicates which way barometric pressure is trending. The Perception II features a set of alarms for temperature, humidity and barometric trend which can be programmed to sound whenever a reading passes a particular point. Comes complete with AC power adapter and detailed instruction book. A 9 volt battery (not supplied) will retain data during power interruptions. May be placed on a flat surface or wall hung with supplied bracket. [Davis 7400]

List $150.00 *Order #4355* **$134.95**

## LA CROSSE TECHNOLOGY WS-7014CH



The **La Crosse Technology WS-7014CH** forecast station shows: indoor and outdoor temperature [-21.8° to 156.2° F in 0.1° resolution], with Min/Max, indoor humidity, and has a forecast icon based on changing air pressure. The time display is radio controlled and automatically sets. It can display any time zone from GMT to -12 hours GMT, in either 12 or 24 hour format. The included TX6U remote temperature sensor must be placed within 80 feet of the main unit. Requires four AA cells (not provided). May be hung or used free standing,

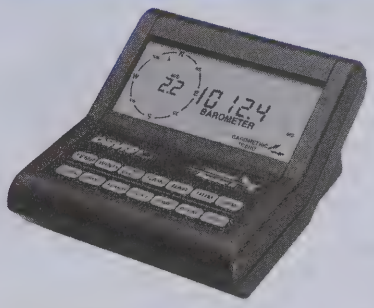
List $74.95 *Order #4070* **$59.95**

## WS-7013U

The **WS-7013U** temperature station and digital 12/24 hour clock simultaneously displays the indoor and outdoor temperature. TX6U remote temperature sensor is included. Requires 6 AAA cells (not provided). 2.75 x 1 x 4.25 inches.

*Order #0228* **$24.95**

## WEATHER MONITOR II



The **Davis Weather Monitor II** is a powerful computer weather station with all the most-requested features. Monitor wind speed, direction and wind chill. Track the barometric trend along with inside humidity and inside and outside temperature. The station includes anemometer with 40 feet cable and external temperature sensor with 25 feet cable. Cables are connected to the console through a junction box with 8 feet of cable. Console includes AC-power adapter with battery backup (battery not included). Backlit display for easy viewing. [Davis 7440]

List $295.00 *Order #4372* **$279.95**

## WEATHER MONITOR II CS

This CS-*Complete Station* version is the same as the standard Weather Monitor II, but additionally includes a self-emptying tipping-bucket 0.01 inch rain collector. [Davis 7440CS]

List $395.00 *Order #4439* **$369.95**

## WEATHER WIZARD III

The **Davis Weather Wizard III** displays indoor and outdoor weather conditions at the touch of a button. Large display includes compass rose which shows continuously updated wind direction and wind speed information. Station includes anemometer with 40 foot (12m) cable and external temperature sensor with 25 foot (7.5m) cable. Cables are connected to the console through a junction box with 8 foot (2.4m) of cable. Includes AC-power adapter with battery backup (battery not included). [Davis 7425]

List $195.00 *Order #4357* **$175.95**

## WEATHER WIZARD III CS

The CS-*Complete Station* version is the same as the standard Weather Wizard III, but additionally includes a self-emptying tipping-bucket 0.01 inch rain collector. [Davis 7425CS]

List $250.00 *Order #4438* **$239.95**

**For more weather instruments visit:**
**www.universal-radio.com**

## COFFEE MUG

This blue American made ironstone mug features the Universal Shortwave globe logo and lettering in white and red. Holds 10 oz.

**Universal Mug** *Order #4226* $6.95

## CASE

This padded canvas carrying case is just right for transporting and protecting your larger portable radio. With shoulder strap and zippered side pocket. 12 x 8 x 4 inches. Black with Universal Radio globe logo.

**Universal Case** *Order #0395* $29.95

## UNIVERSAL TEE-SHIRTS

This comfortable Universal tee-shirt is a 50/50 cotton blend and features a small logo on the front and a large logo on the back. The tee shirt is white and the logo is deep blue.

| | | |
|---|---|---|
| **Small** | *Order #4386* | $10.95 |
| **Medium** | *Order #4387* | $11.95 |
| **Large** | *Order #4388* | $12.95 |
| **X Large** | *Order #4389* | $13.95 |
| **XX Large** | *Order #4390* | $14.95 |
| **XXX Large** | *Order #4391* | $15.95 |

## UNIVERSAL POCKET KNIFE

The Universal brass and steel pocket knife has 7 functions: knife, scissors, cork screw, can opener, bottle cap opener, philips screwdriver and file.

**Pocket Knife** *Order #0824* $3.95

## UNIVERSAL DENIM SHIRTS

This button-down, casual classic soft blue denim, 100% cotton shirt is prewashed and very comfortable. Universal logo on the front pocket.

| | | |
|---|---|---|
| **Small** | *Order #2589* | $32.95 |
| **Medium** | *Order #0920* | N.L.A. |
| **Large** | *Order #2595* | $34.95 |
| **X Large** | *Order #0831* | $35.95 |
| **XX Large** | *Order #0121* | $36.95 |

## 300-40

Are you tired of having every interseries adapter, except the one you need? Then consider the **300-40** 40 piece RF adapter kit. It contains two each of: BNC Female, BNC Male, TNC Female, TNC Male, N Female, N Male, UHF Female, UHF Male, Mini UHF Female, Mini UHF Male, SMA Female, SMA Male, F Female, F Male, RCA Female, RCA Male and 8 Pieces Universal Adapter. This is every interseries adapter you are likely to need. And they are gold plated, gold contacts and have Teflon insulation. You simply screw the two desired ends to the universal adapter to configure your adapter. It comes complete in a padded, soft, zippered carrying case (7.5 x 2 x 5 inches).

**300-40** *Order #3613* $149.95

The **300-30** kit is similar, but with 30 pieces.

**300-30** *Order #3666* $119.98

## Worldwide Travel Kit TC-6

The **TC-6** travel kit converter kit provides for your foreign electrical travelling needs in most foreign countries. It allows the operation of many 110 VAC appliances from 220 VAC voltage used in many countries outside North America. This voltage converter changes 220 VAC to 110 VAC and includes 5 different plug adapters. This device can be used on both electronic and heating-type appliances up to these capacities: **50 Watts** for electronic items such as: radios, calculators, tape recorders and answering machines. **1600 Watts** for heating-type items such as: curlers, irons, steamers and bottle warmers. In a compact case 6 x 2.8 x 4 inches 1.4 Lb.

**TC-6** *Order #1296* $31.95

## CALTRONICS CT-PAK4

The **Caltronics CT-PAK4** color cable tie kit comes in a pocket protector. You get 50 cable ties in 5 different colors. The 4 inch ties can bundle1/6 inch to 7/8 inch diameter. Min. tensile strength is 18 lbs.

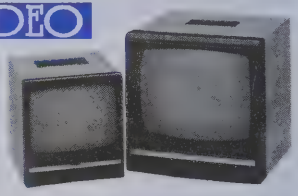
**CT-PAK4** *Order #2265* $4.95

## TENBA P301

This high-quality, **Tenba P301** protective case is the best insurance you can buy for your handheld scanner, wideband receiver or HT. The main pocket will comfortably store your radio and the AC adapter, antenna, extra batteries and accessories. Additionally, there is a zippered, top loading front pocket to separately store small accessories like earphones. The P301 uses Protek™ cloth, a waterproof, rugged and easily cleaned ballistic nylon, plus it has protective padding built into all four sides and the bottom. It can be carried via the hand grip, shoulder strap or belt loop. Size: 6 1/2 x 8 1/2 x 5 inches.

**Tenba P301** *Order #3514* $19.95

## PROVIDEO VM-901B VM-1201B



The **ProVideo VM-901B** monitor is a high-quality, small metal cased composite monitor. This 9 inch diagonal video monitor has > 800 lines resolution, BNC input. Front controls include: Power, Contrast, Brightness, Horizontal and Vertical Hold. 8.6"W x 9.5"H x 10"D 13 Lbs. 120 VAC 60 Hz.

**VM-901B** *Order #3309* $159.95

The **ProVideo VM-1201B** has a 12 inch screen. 12" x 11.5" x 12.5" 20 Lbs. 120 VAC 60 Hz 32W.

**VM-1201B** *Order #3310* $199.95

## C. Crane FMT

The **C. Crane FMT** FM transmitter is the easy way to send audio to any nearby FM radio. Send audio from your computer to your home stereo or audio from your XM™ radio to any FM receiver in your home. The FMT will transmit full stereo on any FM frequency from 88 to 107.9 MHz. The LCD shows you the selected frequency. The approximate line-of-sight range is 70 feet (walls and metal objects will reduce range). The FMT runs on an included AC adapter or two optional AA batteries. 3.1 x 3.5 x 1.1 inches 5.8 oz. The FMT has an audio input cable wired to it that terminates in a 3.5mm stereo plug.

**FMT** *Order #1034* $69.95

## Associated ARC109 ARC110

How do you safely connect a PL-259 to the SMA jack on your handheld radio without stressing the radio's connector? The answer is the ARC109 cable assembly. It is made with 4 feet of very low loss LMR-100 coaxial cable (*not* high loss RG174!). [More cables on page 73!].

**ARC109** *Order #4513* $18.95

Same 4 foot cable but SO-239 to BNC male.

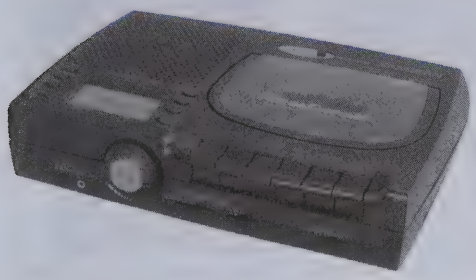
**ARC110** *Order #4512* $17.95

## CAP SO239

If you carry your HF rig around, consider purchasing a rubber dust cap for the antenna input. These red dust caps come in a package of two.

*Order #4432* $0.99

## C. Crane VersaCorder



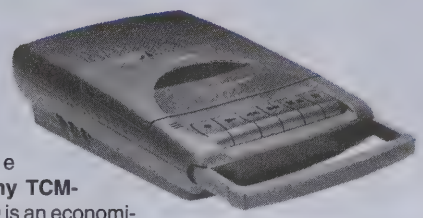
The **C. Crane VersaCorder** is a very special cassette recorder. It can record and play back at regular speed or 1/4 speed. You can record up to 4 hours on one side of a cassette! It's perfect for recording and playing back talk shows and meetings. You can record up to six events with a built-in timer. You can select between 1/4-speed recording for voice or regular speed for music and playback of regular tapes. (No auto-reverse). To record a radio show while you are away, just connect the VersaCorder to the earphone jack of any radio, set the timer, and press the record button. The built-in, high quality speaker allows you to listen while you record or you can turn the volume off for silent recording. A special tri-plug patch cord is included for use with the ***CCRadio plus*** radio (as shown on page 27). You can also make a decent recording directly from the radio's speaker to the VersaCorder's built-in microphone. Built-in voice activation is ideal for recording meetings where there may be pauses in a conversation. The tape will stop until it hears a sound, thereby saving tape and playback time. Requires 4 C cells (not supplied) or will operate with the included AC adapter. 10 x 2.675 x 6.5" 2.4 lbs.

**VersaCorder** *Order #4529* **$99.95**

Blank C-60 sixty minute cassette (30 minutes to a side), In clear case.

**C-60** *Order #1755* **$0.99**

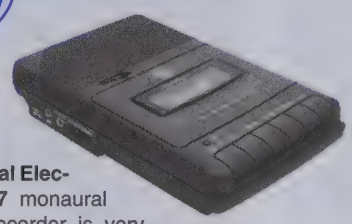
## SONY TCM-929



The **Sony TCM-929** is an economical way to record from your radio. It features a built-in mic, auto shut-off, a pause control, digital counter and cue-review. It operates from a supplied AC adapter or may be operated from four AA cells (not supplied). It is just right for making off-the-air tapes. The mic jack allows direct connection to most receivers' record output jack.

**Sony TCM-929** *Order #0449* **$24.95**

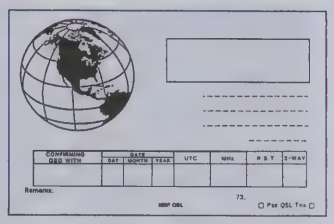
## 3-5027



The **General Electric 3-5027** monaural cassette recorder is very compact but has many features. It has a built-in mic plus provisions to plug in an external mic with remote. It has 3.5mm mini ear jack and built in handle. The 3-digit tape counter is handy for finding specific points on the tape. It also features an auto end-of-tape shutoff and Automatic Level Control (ALC) in record mode. It takes standard size cassettes. It comes with an AC adapter or can also be operated from four cells. Only 5 x 1.9 x 7.3 inches. One year limited factory warranty.

**GE 3-5027** *Order #2675* **$23.95**

## QSL CARDS



These blank QSL cards are printed on heavy 65# parchment stock in an assortment of colors. All pertinent information is provided on the front side for your convenience. **Package of 100 QSLs.**

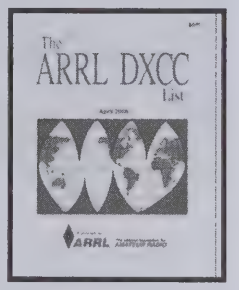
Globe QSL *Order #1116* **$4.95**

## QSL CARD HOLDERS

These heavy-weight clear vinyl holders are perfect for protecting and displaying those prized QSL cards on your wall. The two card holders per package will each display twenty cards. The cards are displayed 2 across and 10 down. Each pocket is 6 inches wide and 3.75 inches high (15.2 x 9.5 cm). The overall dimensions are: 12 inches wide and 42 inches tall (30.5 x 107 cm).

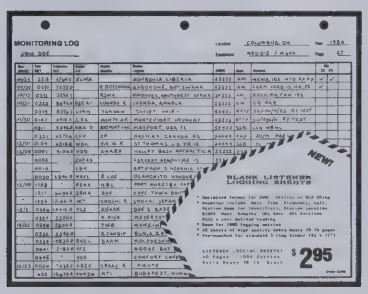
**QSL Holder** *Order #0719* **$9.95**

## A.R.R.L. DXCC LIST




Record the DXCC Entities you've worked and QSLed! This new edition includes a complete listing of DX Century Club rules. It contains information about each entity on the DXCC List, deleted entities, and the latest DXCC Entity additions. Also included are a prefix cross-reference, the list of international call sign series, and much more. Descriptions of all DXCC awards are covered, and information about how to get numerous DXCC items. ©2006 *ARRL*.

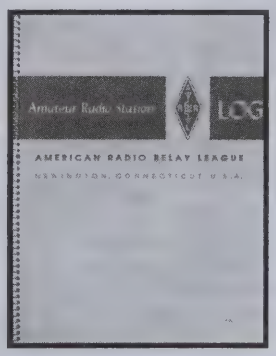
**DXCC** *Order #3024* **$5.95**




## SHORTWAVE LISTENER LOGGING SHEETS

These sheets have been designed to include all the information from your listening. Headings include: Date, Time, Frequency, Call, Station ID, Location, SINPO, Mode, Remarks, QSL Sent and QSL Received. 40 sheets for 1000 loggings.

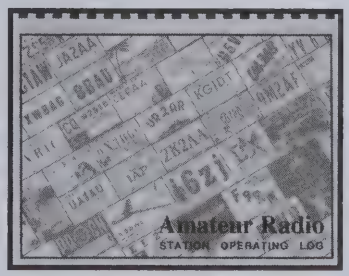
*Order #2886* ..... **$2.95**




## A.R.R.L. AMATEUR RADIO STATION LOG

This popular 8½" x 11" log is bound with a metal spiral. Headings are: Date, Frequency, Mode, Power, Time, Station Worked, Report Sent, Report Received, Time Off, Comments, QSL Sent and QSL Received. ©1989 *ARRL*.

*Order #0773* ..... **$7.95**




## UNIVERSAL AMATEUR RADIO STATION LOG

This 8½" x 11" log is spiral-bound. The log headings are: Date, Time Start, Time End, Frequency, Mode, Station Worked, Signal Report (His-Mine), QTH, Comments, QSL Sent, QSL Received and Zone. 30 pages. ©1989 *Universal Radio Research*.

*Order #2845* ..... **$3.95**

## A.R.R.L. AMATEUR RADIO STATION MINI LOG

This popular, spiral bound 6.25 x 4 inch mini log has headings for: Date, Time, Frequency, Mode, Station Worked, Report Sent, Report Received, Comments. 96 pages are for recording 720 contacts. *ARRL*.

*Order #4057* ..... **$4.95**

### ARRL HANDBOOK CD 2004

The famous *ARRL Handbook 2004* is now available in convenient, CD-ROM format. All text and illustrations are included plus a powerful search engine, audio clips, zooming controls and Windows printing. For: Win95/98/NT4/2000/ME. 1 Mb of HD, VGA/SVGA. Close-out.

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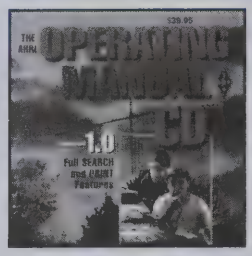


### ARRL - OPERATING MANUAL

The famous *ARRL Operating Manual* is available as a convenient CD-ROM. It includes the entire contents of the printed 7th Edition. For: Windows95/98/NT-4/2000. Requires 486 or Pentium CPU, 1 MB of HD. Can also be used with Mac System 7.1.2 or later.

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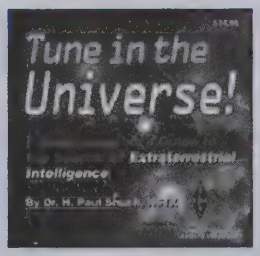
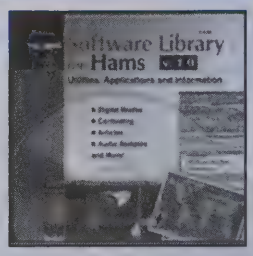



### TUNE IN THE UNIVERSE SETI

H. Paul Shuch N6TX, has made an enticing, personal, good-humored, wise, and browse-able book on one CD. It is packed with accounts of relevant disciplines, rational model calculations and more. Richly illustrated plus it includes recordings of 16 'Dr. SETI' songs. Win/Mac/Linux

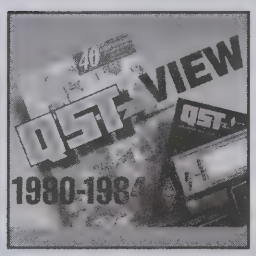
*Order #4487* ..... $24.95




### ARRL SOFTWARE LIBRARY FOR HAMS

Programs for APRS, Winlink 2000, packet radio, contesting, logging, WinDRM decoding, CW decoding and satellite tracking. Also software for PSK31, MFSK16, MT63 and RTTY. Plus tools for calculating transmission line loss, creating DSP audio filters, and more. *ARRL* ©2006.

*Order #4739* ..... $19.95




### QST VIEW

Back issues of *QST* are now available in Windows CD-ROM format. Each page has been scanned to provide a black and white image that can be read on your computer screen or printed. *ARRL.*

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- **QST View CD 1940-1949** *Order #2167* ..... $39.95
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Absolutely everything for the crystal set designer. For Win95 up. *Sonoran/Mathstar.*

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### QEX COLLECTION

Includes all issues of this special ARRL publication from 1981 to 1998. Search by author or title. Requires Pentium CPU, Windows.

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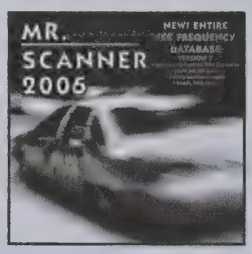


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Features many satellite tracking programs.

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Includes control programs for many common transceivers.

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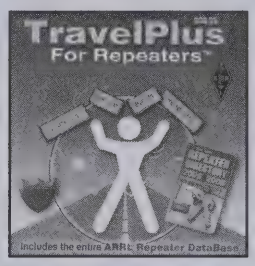


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Here is a great resources for any travelling ham. Choose your route and see which VHF/UHF repeaters are in range. Includes color maps with major highways of USA and Canada.

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### SUPER FREQUENCY LIST CD 2006

This popular guide by Klingenfuss is now on CD. 10,200 shortwave utility frequencies, updated as of 12/05 are featured, plus 920 abbreviations. You also get 10,100 entries with SW broadcast schedules. Browse and search for frequencies, stations, callsigns, languages & countries. Win3x/95/98/2000/Me/XP.

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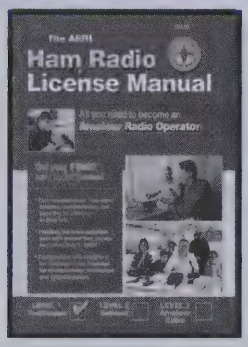


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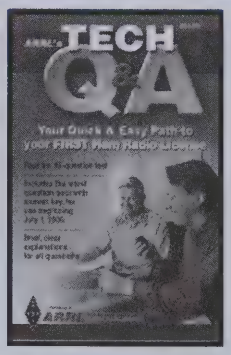


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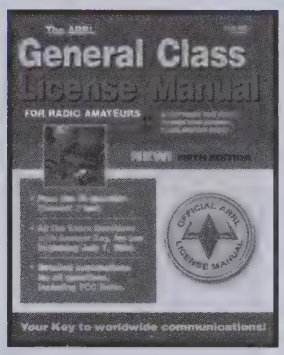


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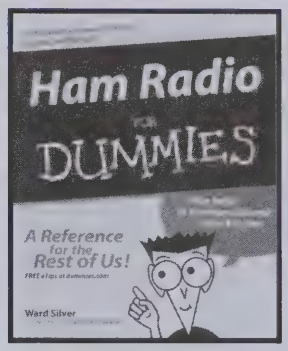


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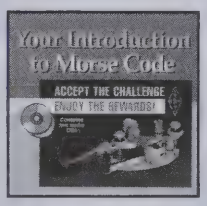


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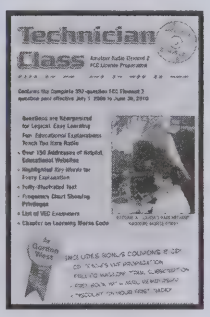


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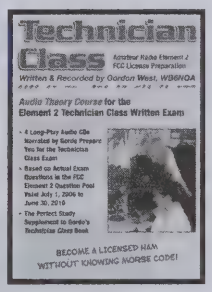


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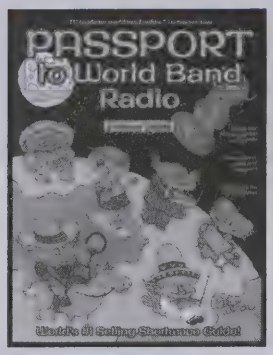


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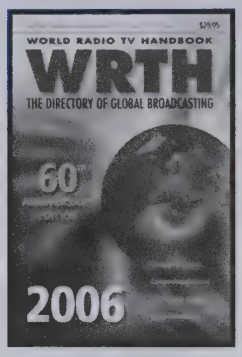


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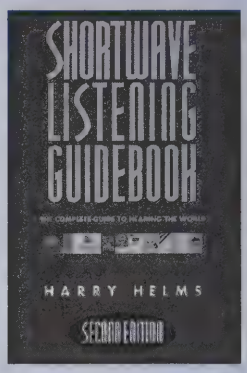


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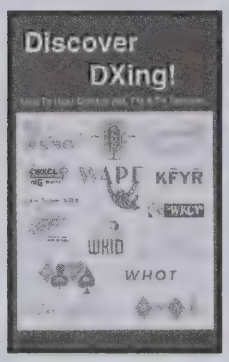


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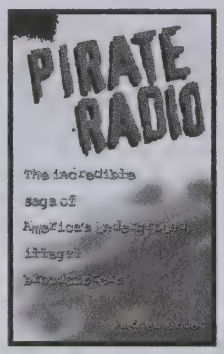


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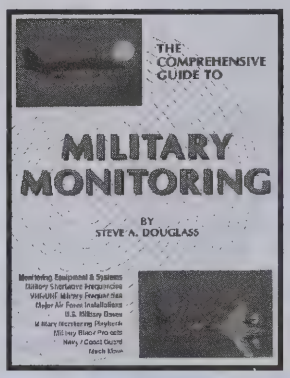


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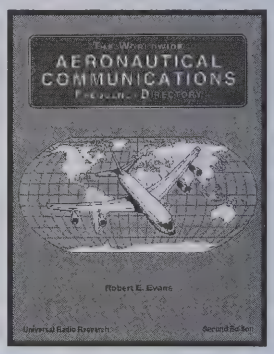


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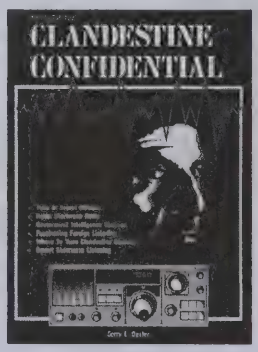


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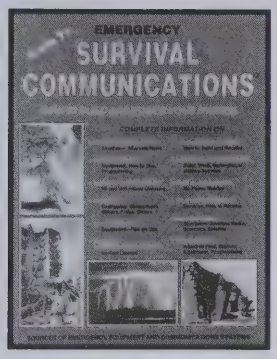


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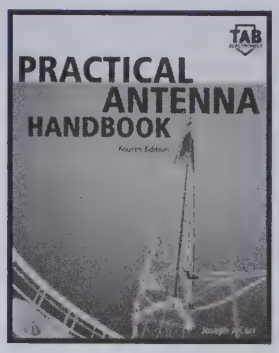


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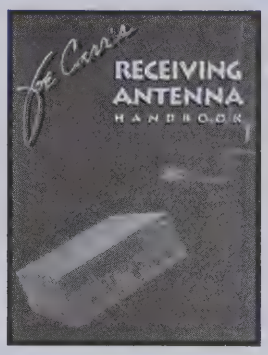


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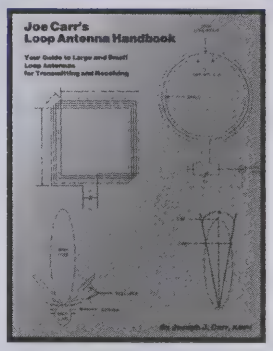


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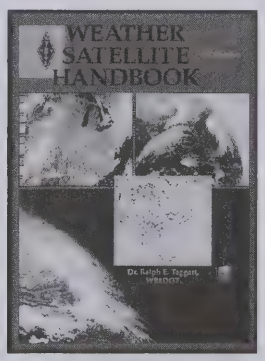


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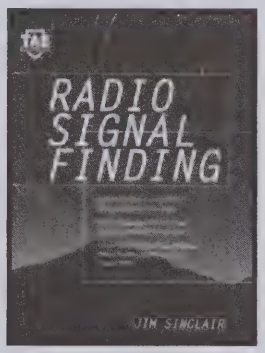


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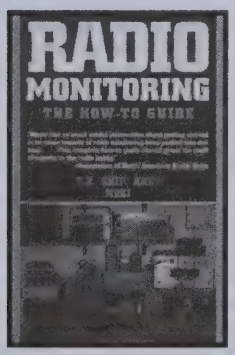


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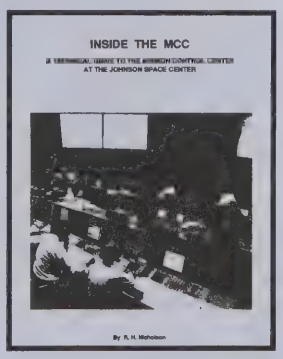


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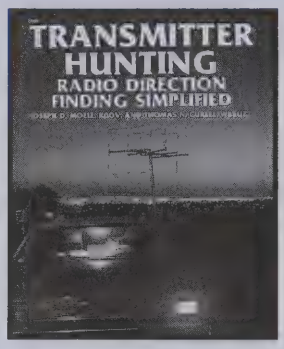


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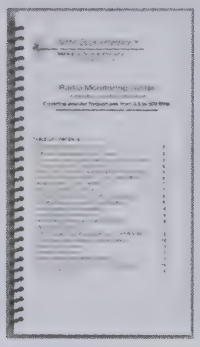

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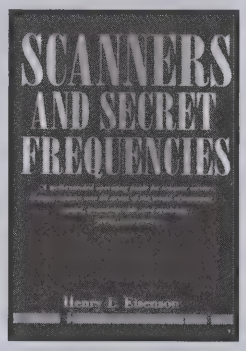


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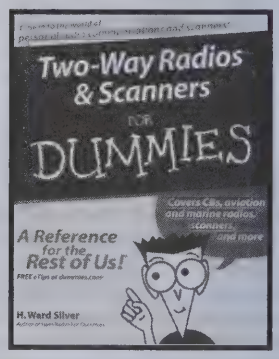


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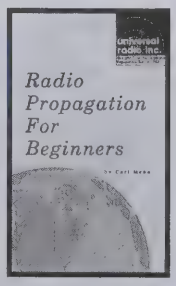


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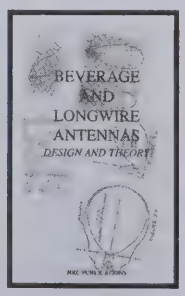


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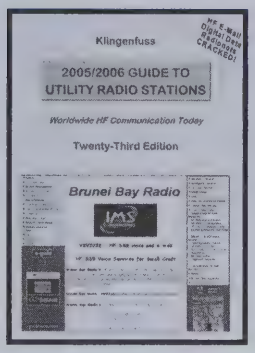


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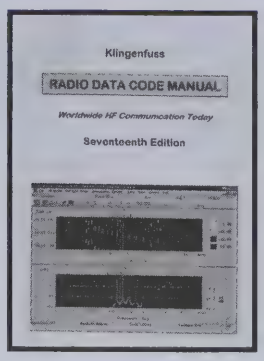


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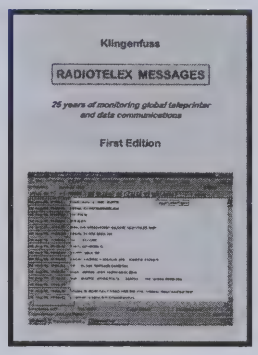


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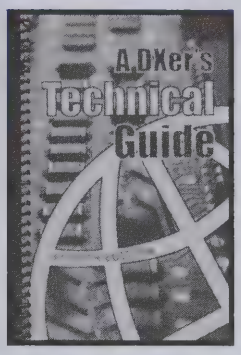


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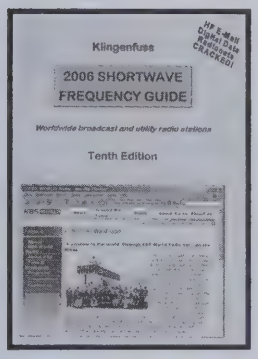


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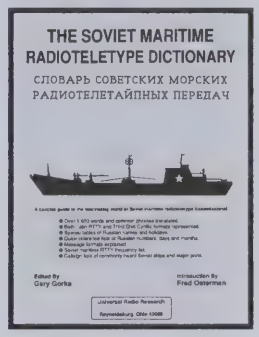


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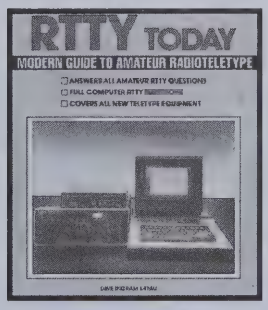


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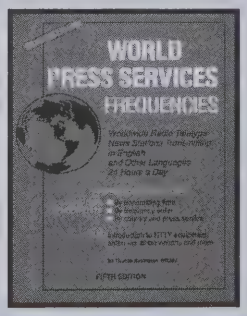


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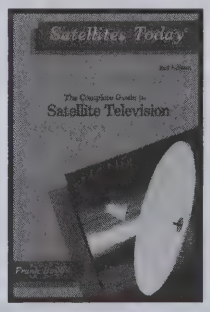


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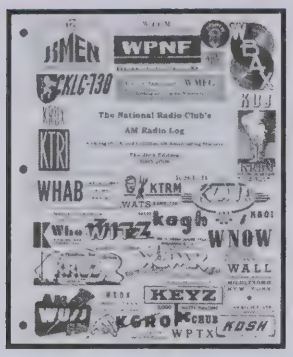


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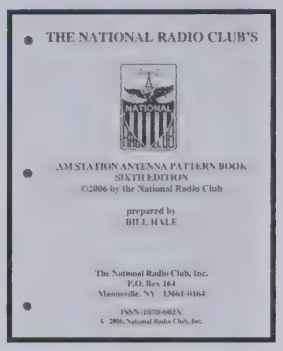


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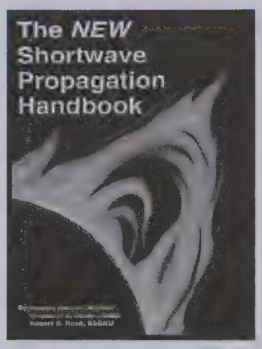


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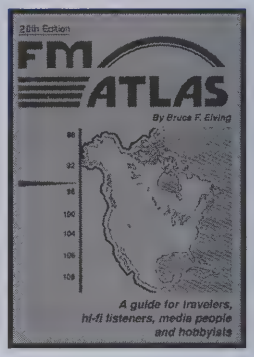


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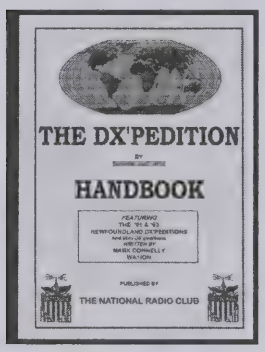


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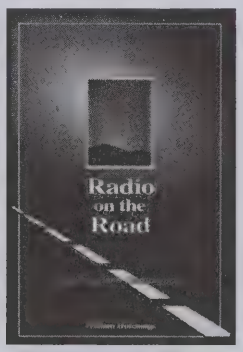


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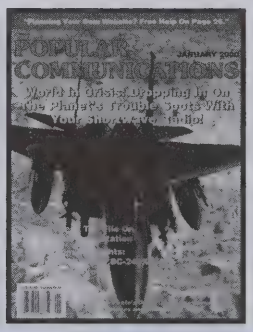


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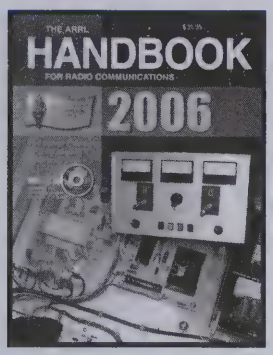


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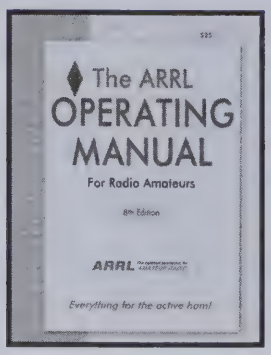


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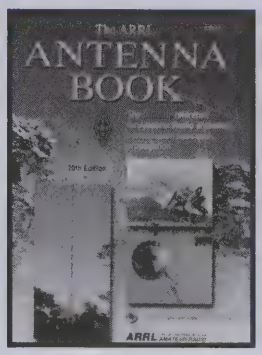


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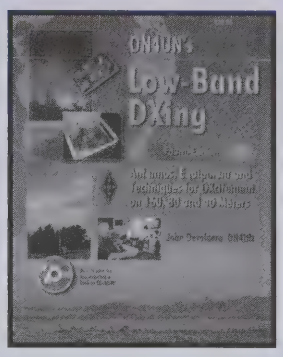


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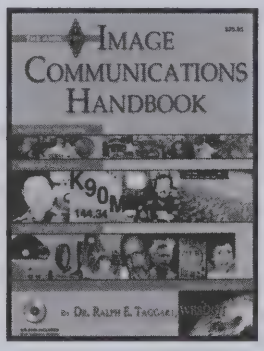


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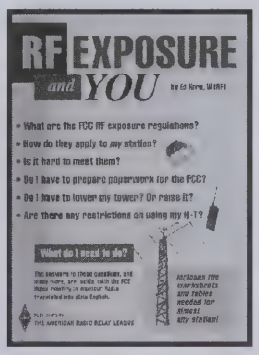


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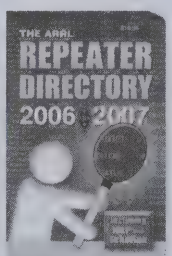


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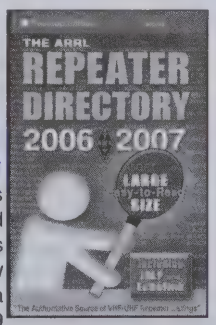


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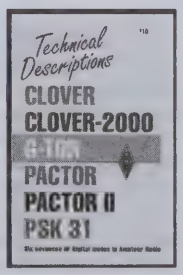


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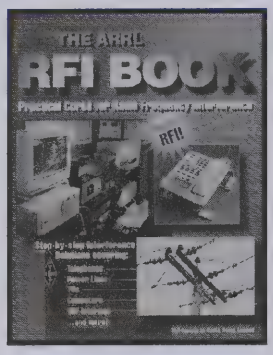


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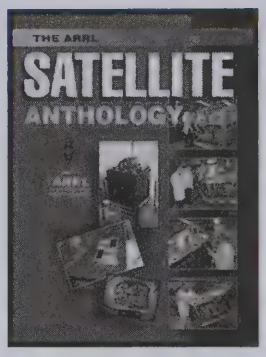


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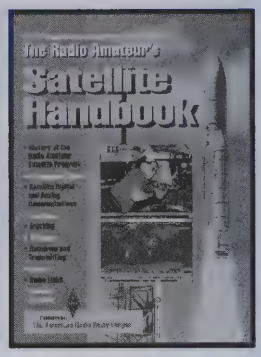


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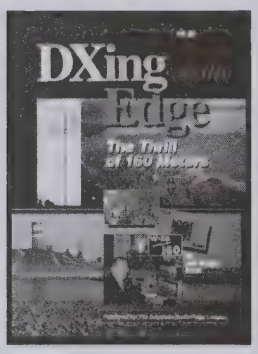


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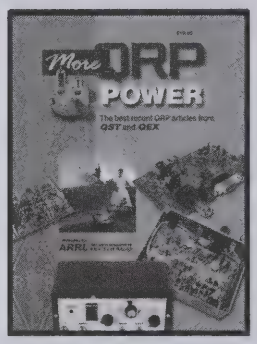


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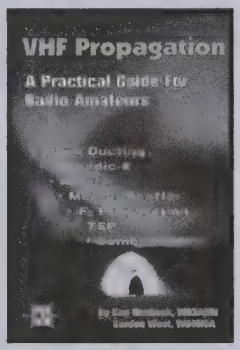


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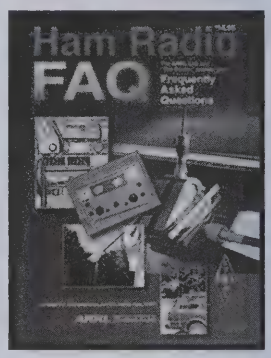


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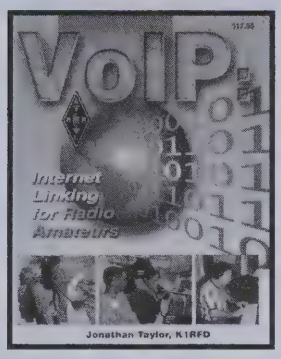


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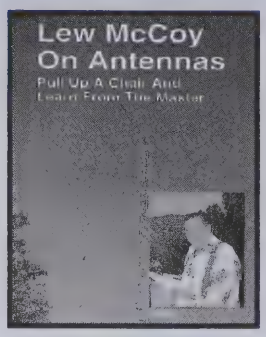


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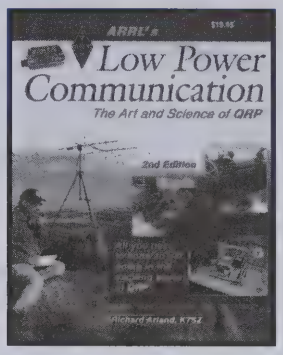


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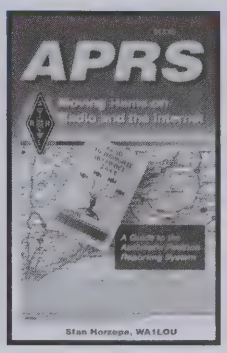


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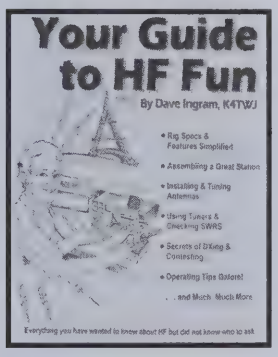


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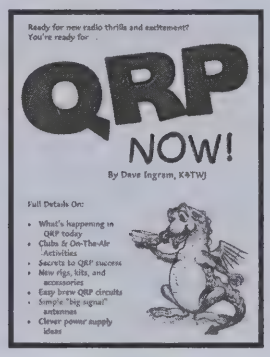


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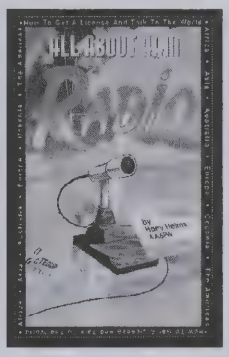


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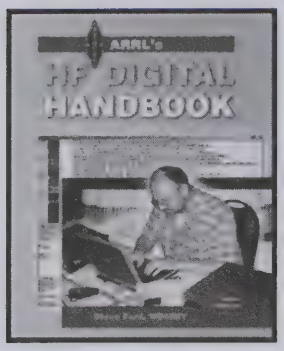


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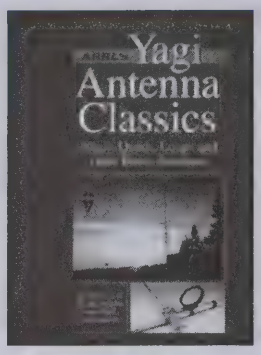


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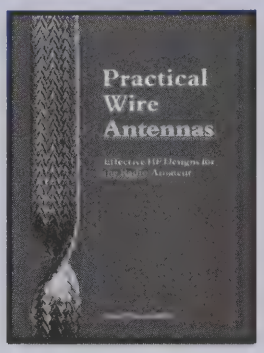


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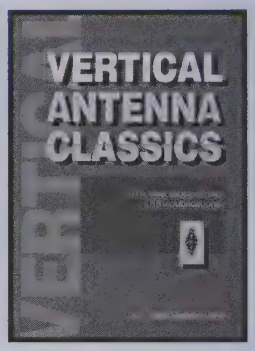


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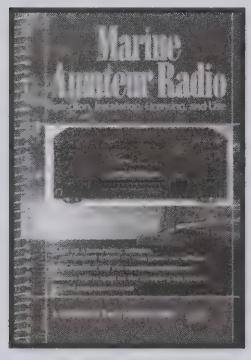


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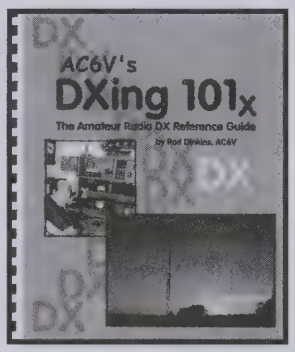


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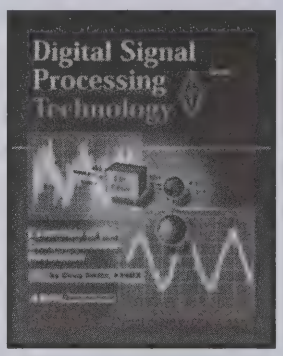


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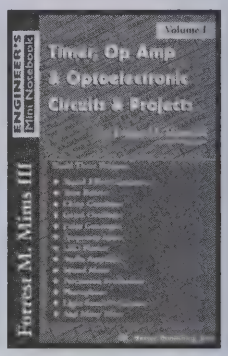


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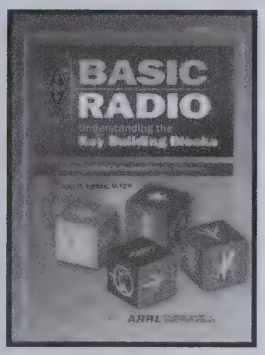


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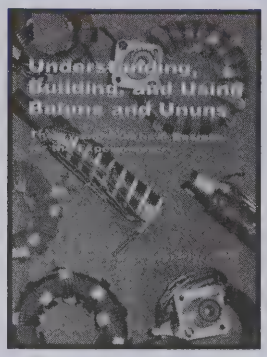


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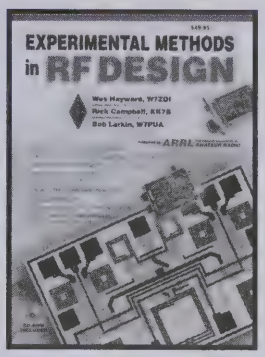


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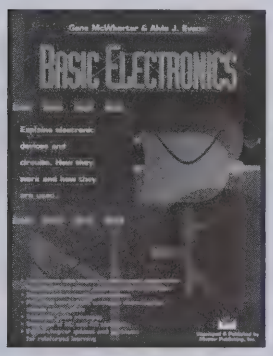


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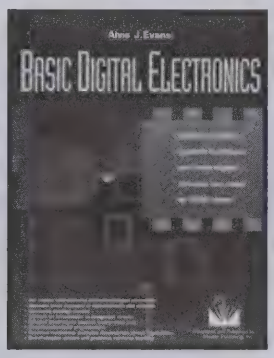


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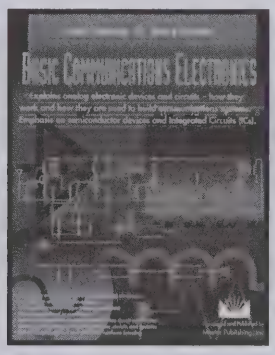


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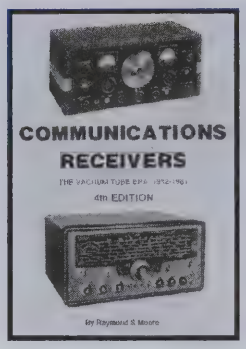


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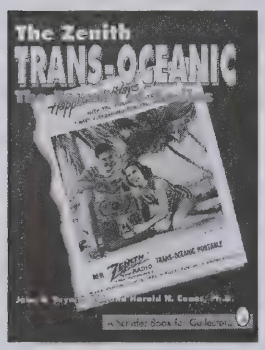


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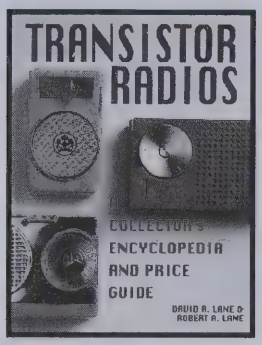


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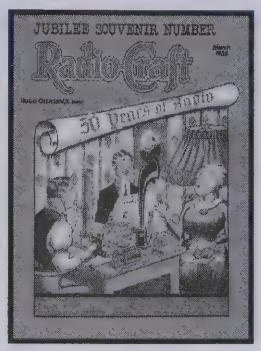


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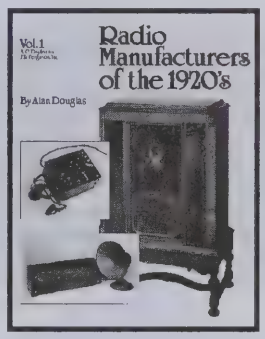


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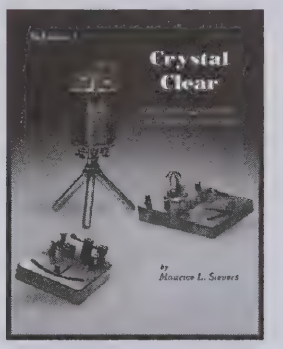


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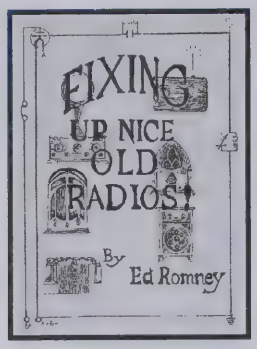


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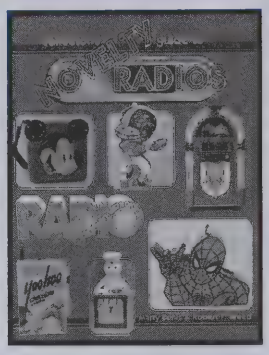


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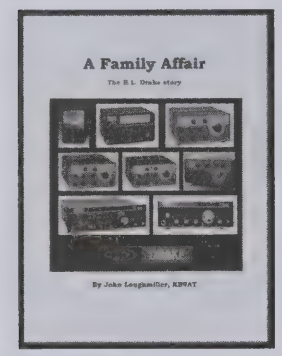


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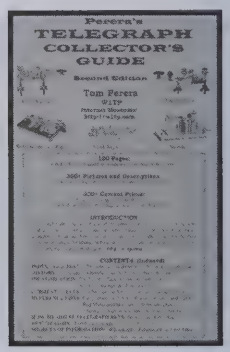


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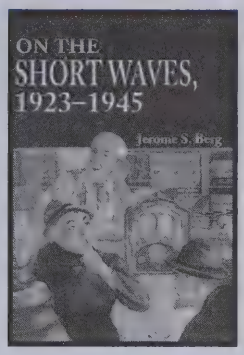


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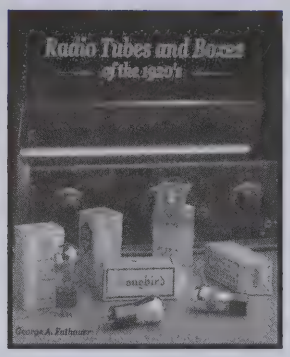


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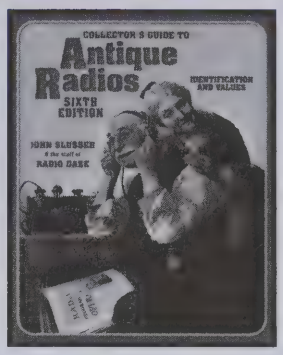


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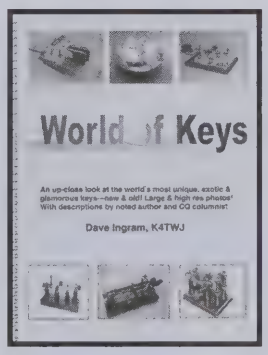


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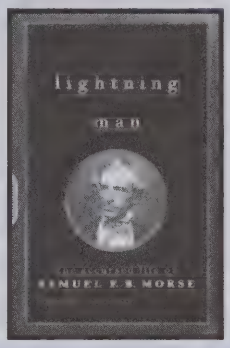


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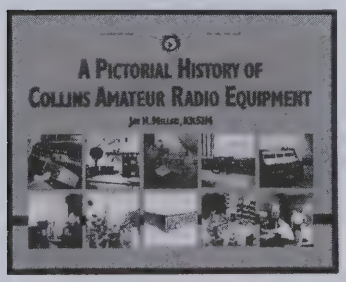


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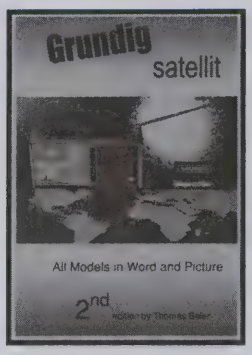


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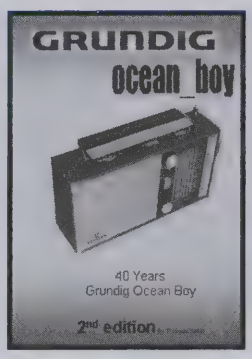


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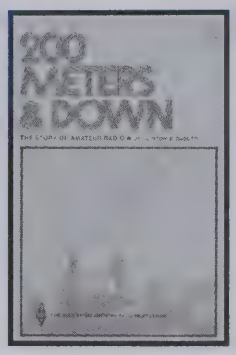


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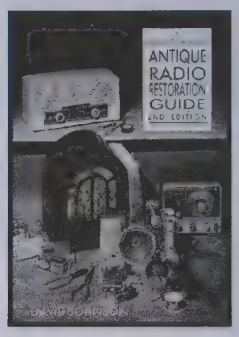


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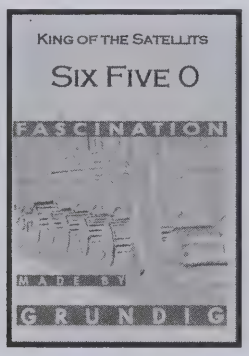


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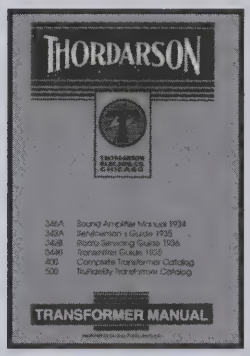


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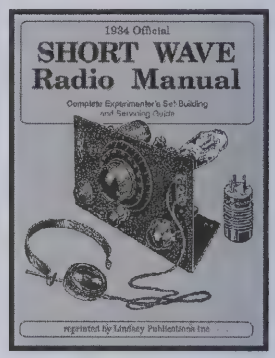


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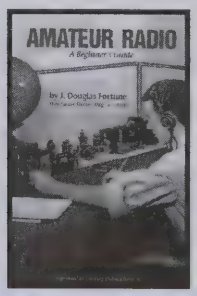


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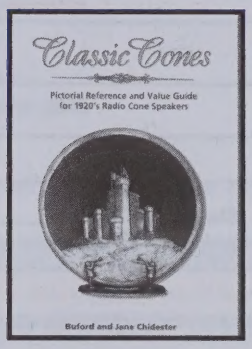


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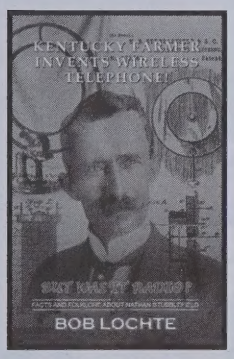


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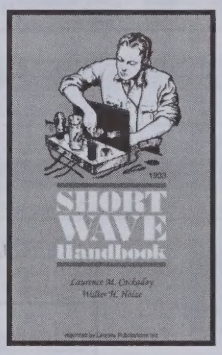


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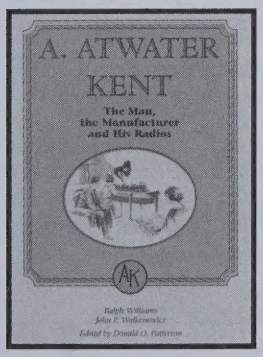


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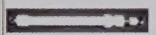
| | Wideband Receivers<br>Scanner Receivers<br>Updated 05/31/06 |  | W2DJG Antenna Wire Wind Damper<br>Updated 06/09/06 |
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